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Student Involvement and Satisfaction with and through the School of Pharmacy

Katherine Bruchman
University of Mississippi. Sally McDonnell Barksdale Honors College

STUDENT INVOLVEMENT AND SATISFACTION WITH AND THROUGH THE SCHOOL OF PHARMACY

By

Katherine Anne Bruchman

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Approved by:

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Advisor: Dr. Alicia Bouldin

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Reader: Dr. Michael Warren

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Reader: Dr. Donna West-Strum

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ABSTRACT

KATHERINE ANNE BRUCHMAN: Student Involvement and Satisfaction With and Through the School of Pharmacy

(Under the direction of Dr. Alicia Bouldin)

Pharmacy students are often defined by their tests scores and grade point averages with too few people willing to acknowledge students' feelings of satisfaction and involvement that may or may not be related to their performance in school. A desire to increase students' test scores often surpasses the desire to increase their satisfaction despite satisfaction being directly related to student success. This cross-sectional study therefore serves to determine how Students of Pharmacy are spending their time both in and out of the School of Pharmacy and whom they're choosing to spend it with, in hopes of identifying contributing factors to a student's involvement and satisfaction with and through the University of Mississippi's School of Pharmacy to hopefully be able to better improve students' experiences and success in school. This study uses a self-administered online survey given to 3rd year Early Entry students and 1st and 2nd year professional students at the University of Mississippi's School of Pharmacy. This study includes questions relating to how students spend their time (and how much of it) in and out of the School of Pharmacy and assesses their social involvement along with their satisfaction with both collegiate life and the pharmacy program here at the university. Membership in different organizations, time spent physically in the pharmacy building, and peer interactions proved to be the biggest predictors of pharmacy students' satisfaction and involvement. Students and faculty should work together to foster a welcoming environment and create increased opportunities for student interactions.

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ABBREVIATIONS

APhA – American Pharmacist's Association

NCPA – National Community Pharmacist's Association

BSU – Baptist Student Union

EE3 – Third-year Early Entry

PY1 – First Professional Year

PY2 – Second Professional Year

GPA – Grade Point Average

INTRODUCTION

Wayne E. Gregg wrote an article almost forty years ago that pointed out a noticeable and troubling gap in the literature concerning the satisfaction of a set of students that was steadily increasing in number – graduate students. He argues that the importance of evaluating their degree of satisfaction while in graduate school is increasing alongside their numbers because how satisfied students are in school directly affects both their achievement within a program and, ultimately, whether or not they complete that program.[1] Since then, the number of undergraduate students, graduate students, and professional students has continued to increase, and yet, that same gap is still there as a result of studies being too focused on summing up students' experiences with test scores and drop-out rates. While being easily quantifiable and more readily available, these numbers do little in the way of improving a student's overall experience or even in helping universities and faculty improve that experience. This study therefore serves not only to lessen the previously mentioned gap in the literature but also to lessen the space standing between objective studies and the student, searching for easily implementable suggestions that can help students improve their satisfaction and enrich their experiences while going to school.

Gregg himself sought to identify predictors of both academic and nonacademic satisfaction in students, but he limited his study to graduate students seeking either their masters or doctoral degrees. Because professional students are neither graduate students

[1] Gregg, W. E. (1972). Several factors affecting graduate student satisfaction. *The Journal of Higher Education, 43*(6), 483-98.

nor undergraduate students, they represent a relatively unique and growing body of students whose satisfaction has also been very little examined over the years. The difficulty in identifying the different factors that contribute to students' satisfaction lies in the sheer number of students enrolled in higher education who all have different majors, minors, and classifications, making it increasingly difficult to find a "one size fits all" solution. There is too much variation within a group as broad as "graduate students" or even just "professional students" – in fact, health-related professional schools alone now include schools of nursing, medicine, physical therapy, occupational therapy, dentistry, and pharmacy. Even within these smaller disciplinary groups, there are so many different colleges and universities that offer such distinct and singular experiences that there can be no single solution. Total first professional degree enrollment in pharmacy schools alone was 62,743 in the fall of 2013, and there are currently "129 U.S.-based colleges and schools of pharmacy with accredited…professional degree programs."[2] I have therefore chosen to limit this exploratory pilot investigation to a single school of pharmacy – more specifically, the University of Mississippi's – in an effort to maximize the applicability of its findings and to identify factors contributing to satisfaction that may be common to other schools as well, hopefully beginning to increase satisfaction one class of student pharmacists at a time.

What are the more satisfied students doing that the less satisfied students aren't? Both groups of students are going to school, but what specifically are the more satisfied students doing while at school and, maybe just as importantly, what are they doing when

[2] American Association of Colleges of Pharmacy. *Academic pharmacy's vital statistics.* Retrieved from http://www.aacp.org/about/pages/vitalstats.aspx

they aren't at school? The key variable in this particular study is how the different students are spending their time – and how much of it is being spent – in and out of the School of Pharmacy. Alexander W. Astin developed an interesting theory about how students spend time and called it the "Student Involvement Theory." Astin calls time a student's "most precious institutional resource" and postulates that the "amount of student learning and personal development is directly proportional to the quality and quantity of student involvement in that program."[3] He paints the picture of the "involved" student as being someone who spends a lot of time on campus and participates in various extracurricular activities such as sports, fraternities, or even an honors program, arguing that these are the students more likely to stay in school and ultimately get more out of it. This study aims to show that Astin's ideas can be applied to a more specific group of people with an even greater opportunity to get involved through professional organizations and their respective different service activities; instead of focusing on involvement around campus, the focus will be solely on involvement within the School of Pharmacy. The purpose of this study is to identify factors that contribute to a student's overall satisfaction in the pharmacy program. Then, eventually, the goal will be to make this information available to current and future Students of Pharmacy at Ole Miss in hopes of improving their satisfaction, social involvement, and success through school.

In order to paint a picture of some things this study is not, it might be helpful to mention one other article in particular titled "Significant Factors for Predicting Academic Success

[3] Astin, A. W. (1999). Student involvement: a developmental theory for higher education. *Journal of College Student Development, 40*(5), 518-529.

of First-Year Pharmacy Students." The study shows how pre-pharmacy GPAs, science GPAs, and PCAT scores correlated with first year pharmacy student GPAs.[4] The study limits interpretation to exam scores only. Academic success may indeed contribute to satisfaction, but test scores can be poor representations of people, and studies that use those alone as both independent and dependent variables are missing a huge piece of the puzzle – more specifically, they're missing factors such as relationships, friendships, organizational meetings, and countless other potential variables that exist in the gray area between pre-pharmacy scores and professional program scores. Therefore, in an effort to begin defining the gray area, this study will attempt to explain the effect students' relationships, organizational involvement, and time spent out of the classroom have on their overall satisfaction and involvement within the School of Pharmacy.

Astin's theory focuses more on the behavioral component of involvement rather than the traditional psychological one – it's concerned more with physical engagement opposed to cognitive engagement. Time management is stressed in college for a reason – there are about a hundred different things competing for a student's time and energy at any given moment. Students have to make decisions about how to spend their out of class time and whom to spend it with, and all of those decisions add up to equal a unique experience characterized by varying levels of satisfaction and involvement. Interestingly, one study shows a negative association between pharmacy student applicants' GPAs and future organizational involvement within the school of pharmacy.[5] The students who entered

[4] Chisholm, M. A., Cobb III, H. H., Kotzan, J. A. (1995). Significant factors for predicting academic success of first-year pharmacy students. *American Journal of Pharmaceutical Education, 59*.
[5] Elinor, C. G., Chumney, & Ragucci, K. R. (2006). Student satisfaction and academic performance in a PharmD/MBA degree program. *Am J Pharm Educ, 70*(2), 29.

pharmacy school with better grades were actually less likely to join clubs and hold leadership positions. Could pharmacy school be an exception to the rule, and could involvement in pharmacy school be inversely associated with satisfaction because of a desire for top grades (perhaps a partial result of current admission criteria?) No single study could definitively answer all the different parts of that question, but determining the association between involvement and satisfaction within pharmacy school will be attempted here. Several independent variables including student-faculty relationships, overlap between classmates/roommates/friends, organizational involvement, and activities occupying time spent outside the classroom will also be measured in an effort to explain varying levels of satisfaction. These particular variables were chosen after review of the literature and first-hand student experience.

The existing literature agrees that taking the time to meet and get to know your professors can have the single greatest impact on both dependent variables of interest – student involvement and satisfaction.[1,6,7,8] Building a relationship with a teacher may require initiative and may not be as convenient as simply joining an organization. Developing that relationship is not something you see a poster for in the student union or sign up for at a table during welcome week – it requires time and effort and can even be a little bit intimidating. In the previously mentioned study by Gregg, however, student-faculty interactions were found to be the "best predictor of both academic satisfaction and nonacademic satisfaction…experienced by graduate students."[1] Studies show that both frequency and quality of interactions with faculty members are positively correlated with students' satisfaction during graduate school[6] (and may be similar for professional

schools). These interactions have been shown to be especially important during the first year of a program when the student is attempting to acclimate to a new scene while coping with the increased demands of higher education.[6,7,8] Whether entering a four-year university, a graduate school, or a professional school, the first year is inevitably going to consist of a transition period where the student is forced to adapt to higher demands and expectations, often times in a new place filled with new faces. While student-faculty interactions are the best studied of the different independent variables included in this particular study, there still appears to be a shortage of recent and pharmacy-relevant findings.

Members of the Sally McDonnell Barksdale Honors College at The University of Mississippi are required to write an Honors Thesis and work closely with their chosen advisers, and several students take advantage of opportunities to conduct research with faculty members within the pharmacy school as well, either as a part of their thesis or as a job. Because student-faculty relationships have such strong support for influencing satisfaction and because I have witnessed firsthand how those relationships can be developed and strengthened through such collaborative research, this investigation includes items related to undergraduate research, as it is expected to have the potential to influence satisfaction, if not directly, indirectly through student-faculty relationships.

[6] Madden, M. E., Linda, C. (1981). Students' satisfaction with graduate school and attributions of control and responsibility. New York: Paper presented at the Annual Meeting of the Eastern Psychological Association, 1981.
[7] Goplerna, E. N. Social support and stress during the first year of graduate school. *Professional Psychology, 11*(2), 283-290.
[8] Endo, J. J., Harpel, R. L. (1982). The effect of student-faculty interaction on students' educational outcomes. *Research in Higher Education, 16*(2), 115-138.

Organizational involvement is defined in this study simply as membership within organizations, whether it be a community-based organization such as Habitat for Humanity and the Baptist Student Union or professional organizations such as the American Pharmacists Association (APhA) and the National Community Pharmacists Association (NCPA). Professional schools offer more opportunities for involvement through their professional organizations that include not only the previously mentioned pharmacy-specific national association chapters but also various fraternities that plan different service activities in and around the community throughout the school year. It's interesting that professional students everywhere are so strongly encouraged to join these professional organizations, yet there have been so few studies up-to-date that include membership in these organizations as any sort of independent variable. Slack and Murphy look at satisfaction within professional organizations, and they found that student influence significantly impacted satisfaction and that the students who were more actively involved within organizations (defined as 'high participation') were more likely to report positive influences from both faculty members and their peers.[9] The study included ten colleges of pharmacy, and of the students at those colleges, 84% surveyed were in at least one organization and almost 37% were in three or more.

A review of the literature revealed numerous studies detailing the kinds of professional relationships that benefit students the most,[1,6,7,8] but very few studies investigate the association between students' informal relationships and either involvement or satisfaction. Post-graduate programs and professional schools have a very limited

[9] Slack, M. K., & Murphy, J. E. (1995). Faculty influence and other factors associated with student membership in professional organizations. *American Journal of Pharmaceutical Education, 60,* 125-130.

number of available spots in any given class, so consequently, there are single classes composed of a variety of highly competitive and driven individuals. Classmates can undoubtedly serve as a valuable resource, but relationships between classmates can easily be of an unhealthy competitive nature. Baird found that students who reported more competitive relationships with friends and classmates actually showed decreased satisfaction in school.[10] Roommates, friends, and classmates can to varying degrees overlap or comprise three very distinct groups of people. For the purposes of this study, the degree of overlap is going to be defined as "Peer Interactions." Of interest is what effect these peer relationships have on an individual's satisfaction and whether or not the more satisfied individuals experience more overlap between the three groups.

Quyen Dinh Do completed a thesis at the University of Medicine and Pharmacy in Ho Chi Minh City, South Vietnam that measured depression and stress in medical students during their first year of school. She found higher rates of depression in students who lived by themselves or with friends than those who lived with their parents or other family, and she also found a significant difference between depression symptoms and students' satisfaction with their friends – students who had no close friends or were unsatisfied with the friends they did have showed higher rates of depression.[11] Those who went out with their friends in addition to watching TV were less likely to be depressed than those who just had one leisure activity and did not go out with their friends, and students who exercised regularly were significantly less likely to experience

[10] Baird, L. L. (1969). A study of the role relations of graduate students. *Journal of Educational Psychology, 60*(1), 15-21.

[11] Dinh Do, Q. (2005). Depression and stress among the first year medical students in university of medicine and pharmacy. Thesis presented at University of Medicine and Pharmacy in Ho Chi Minh City, South Vietnam.

depression.[11] A separate study that looked exclusively at Doctor of Pharmacy students did not examine depression, but found that exercise habits did not affect pharmacy student's stress scores or quality of life ratings.[9]

Part-time employment during the academic school year is another factor shown to contribute to increased psychological distress in students.[12,13,14] According to a study of high school students, working students typically show lower academic performance and engagement, higher stress levels, and decreased involvement in extracurricular activities.[13] In a similar study of college students in 2013, hours worked was not found to be significantly correlated with GPA or depression, but it was shown to affect the incidence of anxiety, with more hours worked corresponding to increased anxiety and higher levels of stress.[12] Certain expenses inevitably accompany being a student of higher education, and many students work as many hours as they can manage during the school year to lessen their future debt upon graduation. The pressure to work and earn an income can be great, but the workload and course commitment can be equally as great, forcing students to manage their time and prioritize their tasks. Because a greater commitment to studies is typically expected of professional students compared to students of lower levels of education, part-time employment may have a negative effect on the psychological state of pharmacy students that is not reflected by their grade point averages. Part-time employment is of particular interest to this study because of previous

[12] Mounsey, R., & Vandehay, M.A., & Diekhoff, G.M. (2013). Working and non-working university students: anxiety, depression, and grade point average. *College Student Journal, 47*(2), 379-389.
[13] Steinberg, L., & Dornbusch, S.M. (1991). Negative correlates of part-time employment during adolescence: replication and elaboration. *Developmental Psychology, 27*(2), 304-313.
[14] Bachman, J.G., & Schulenberg, J. (1993). How part-time work intensity relates to drug use, problem behavior, time use, and satisfaction among high school seniors: are these consequences or merely correlates? *Developmental Psychology, 29*(2), 220-235.

findings showing that as hours worked per week increases, the chance of students sleeping adequate amounts, exercising regularly, and having what they perceive to be a satisfactory amount of leisure time decreases.[13] It therefore has the potential to affect several of the other independent variables in this study.

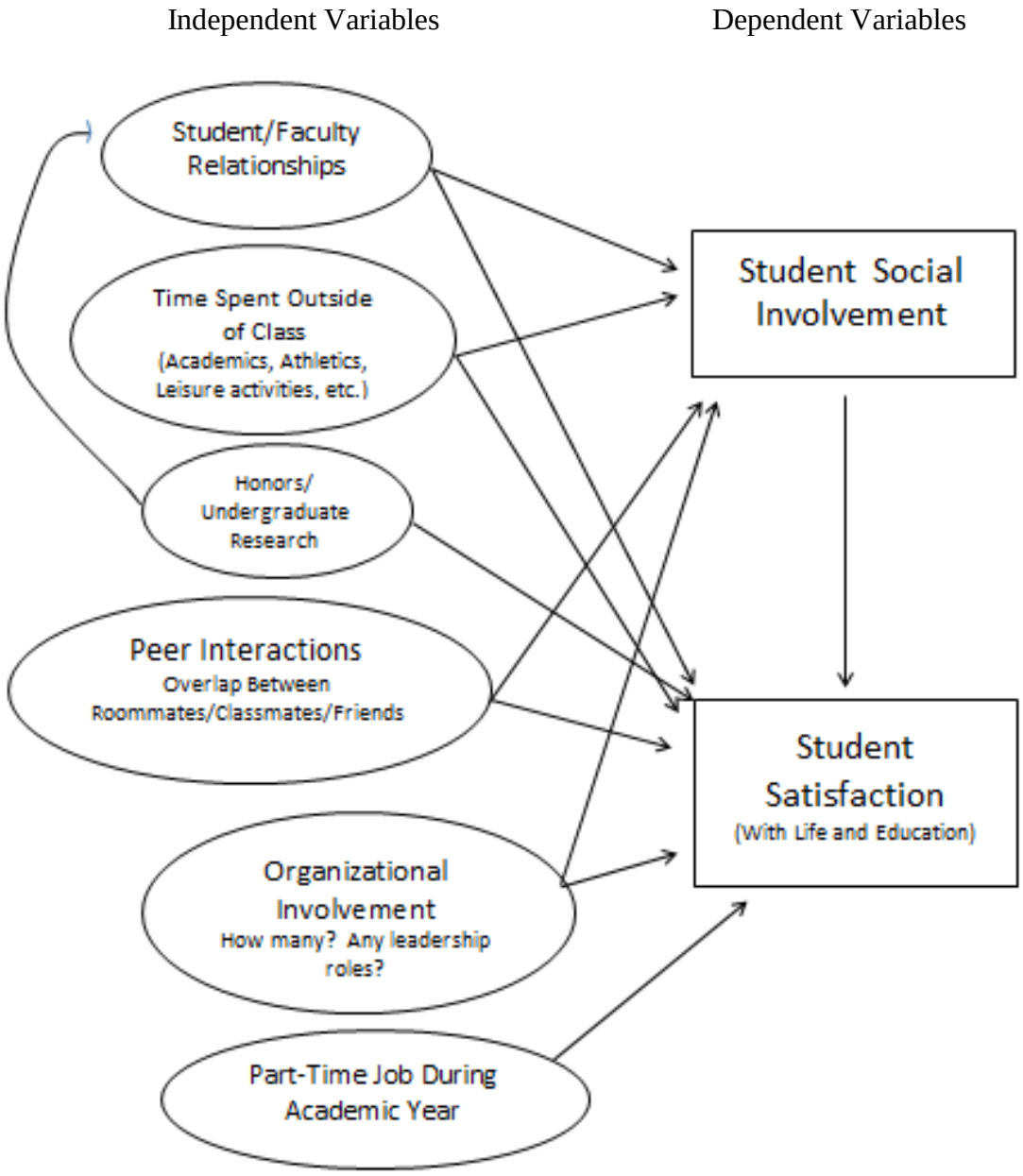
The Accreditation Council of Pharmacy Education actually recommends that universities measure perceived stress in pharmacy students because of the potential for high amounts of stress, especially in the adjustment period associated with transitioning from an undergraduate program to the professional program. Very few stress studies focus solely on pharmacy students, but one study in particular that did include pharmacy students shows that pharmacy students suffer from more stress and distress than either medical or dental students.[15] Another study conducted over a six-year period on medical students around the country shows a significant decrease in life satisfaction from when they begin school to their halfway point – the few students that maintained high levels of satisfaction through medical school "perceived medical school as interfering less with their social and personal life" and managed stress by "seeking social support."[16] This is consistent with other findings that increased social support in college students results in less perceived stress and improved life satisfaction.[17]

[15] Marshall, L. L., Allison, A., Nykamp, D., & Lanke, S. (2008). Perceived stress and quality of life among doctor of pharmacy students. *Am J Pharm Educ, 72*(6), 137.
[16] Kjeldstadli, K., Tyssen, R., Finset, A., Hem, E., Glide, T., Gronvoldo, N. T., Ekeberg, O., Vaglum, P. (2006). Life satisfaction and resilience in medical school – a six-year longitudinal, nationwide, and comparative study. *BMC Medical Education, 48*(6).
[17] Coffman, D. L., & Gilligan, T. D. (2002). Social support, stress, and self-efficacy: effects on students' satisfaction. *Journal of College Student Retention: Research, Theory, and Practice, 4*(1), 53-66.

Satisfaction was and is an underrated and underappreciated variable in terms of its direct effects on student success. An article was published in Health Education Research over twenty years after Gregg's article was published and almost twenty years before this study was conducted pointing out the still-present void in the literature.[18] People are acknowledging the gap, but too few are actually working to close it. This research constitutes a step in that direction.

[18] Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools – a study of the importance of the school climate and the students' satisfaction with school. *Health Education Research, 13*(3), 383-397.

FIGURE 1. CONCEPTUAL FRAMEWORK



METHODS

Data was collected through a self-administered online survey created through Qualtrics. The population consisted of first and second year professional students enrolled in the University of Mississippi School of Pharmacy and third year pre-professional students who are part of the University's Early Entry program. The first-year professional students are the primary interest, and the classes immediately above and below them were also surveyed for use as comparator groups.

The survey itself consists of a series of questions designed to measure each of the independent variables previously mentioned as well as the two dependent variables, student involvement and student satisfaction. The survey consists of a combination of previously established scales as well as some original questions written specifically for this study. It was pre-tested with four of the pharmacy students for face validity and took approximately 10 minutes to complete. The survey link was sent via e-mail to the students eligible to participate in the study, and an in-class announcement was given to two of the three classes to remind them the survey closed that night.

Demographics

The first section of the survey consists of two questions to gather some basic information about the student taking the survey, including his or her gender and classification (EE3 = third year Early Entry pre-professional students, PY1 = first professional year, and PY2 = second professional year.)

Independent Variables

Peer Interactions

Because there are no previous studies that use the overlap between peer groups as an independent variable, there are no established scales that could be used in this section of the survey. The second section therefore includes a series of eight original questions intended to measure the amount of overlap between a student's classmates/friends/roommates. This section begins with a simple yes or no question about whether or not the student lives with another pharmacy student and is followed by five items measured on a 5-point Likert scale. The next questions are concerned with the nature of a student's relationships with his classmates and approximating how much time he spends with them outside of class. The types of questions were intentionally varied in an effort to keep the survey taker engaged through each of the different sections.

Time Spent Outside of Class

One of the aims of this study is to discover how students are spending their time outside of the classroom. Four of the five questions in this section ask for specific numbers (e.g. hours of studying, days of exercising, etc.) in an effort to determine how much of their time they're spending in their different chosen activities. The question that does not ask for specific numbers asks the student to rank four activities in the order of what they spend the most time doing to what they spent the least time doing in an average day. The four activities include studying, sleeping, exercising, and socializing.

Student/Faculty Relationships

Two of the six questions intended to measure student/faculty interactions were adapted from a study conducted by Pascarella and Terenzini at Syracuse University that included a sample of 1,008 undergraduate students.[19] The questions were framed based on the study's defined "Student-Faculty Relationship Variables" which include "Types of Informal Contact" and "Perceived Faculty Influence." The remaining questions in the section are straightforward multiple-choice type questions that were based on local students' responses to a few inquiries about which professors they liked most, which professors they were most comfortable around, and which professors they were most likely to go visit in their offices. This was done informally during the early research stages of the survey development.

Organizational Involvement

The section of the survey that measures a student's organizational involvement consists of eight yes-or-no questions regarding membership in different groups and organizations such as professional fraternities, campus ministries, and the Honors College. There's also one other question that asks how many total organizations the student is a member of. The questions in this section are specific to the different groups located in Oxford and/or represented at the University.

[19] Pascarella, E. T., & Terenzini, P. T. (1978). Student-faculty informal relationships and freshman year educational outcomes. *The Journal of Educational Research, 71*(4).

Dependent Variables

Student Social Involvement

The set of questions used to measure "Student Social Involvement" was modified from an existing student involvement scale that included both academic and social aspects. The scale was developed by Jessica Sharkness and Linda DeAngelo in 2010 using data from the Your First College Year survey administered to UCLA students in 2008.[20] The social aspect of this particular scale was incorporated into the survey because of its focus around student-student relationships and a sense of belonging as opposed to the standard organizational-type involvement. Organizational involvement is instead measured and treated as a predictor variable in this study to hopefully explain some of the variance in social involvement and satisfaction within the school.

The questions were modified slightly in an attempt to make them more relevant to pharmacy; these modifications included re-incorporating the item concerning the ease of developing friendships with both genders and adding an extra item to capture frequency of feelings of inclusion in addition to those of isolation. The gender friendship item was excluded in a previous study because the researchers found that the ease of developing friendships did not vary significantly based on whether the friendships were with males or females. Because the population used in this study, however, is almost two-thirds female, it may be more difficult to develop relationships across genders in class. Feelings of inclusion were added to the scale to broaden the spectrum and show that a lack of feelings of isolation does not necessarily translate to feelings of inclusion.

[20] Sharkness, J., DeAngelo, L. (2011). Measuring student involvement: a comparison of classical test theory and item response theory in the construction of scales from student surveys. *Red High Educ, 52*:480-507.

To frame inclusion in a local context, a single statement (measured on a 4-point Likert scale) was developed and utilizes the term "Pharm Phamily" – a popular term frequently used by the University's pharmacy community. ("I see myself as part of the 'Pharm Phamily.'") The published scale included sections on academic involvement as well, but for the purposes of this study, only the section on social involvement was used. Two additional items were included in this section that involve time spent physically inside the pharmacy school's facilities and a student's study environment preferences.

Student Satisfaction

The very last page of the survey measures students' satisfaction – the main dependent variable used in this study. There are two different scales included in this section; both are established and neither have been modified. The first one is a German adaptation of Hueber's Students' Life Satisfaction Scale from 1991 and was completed, tested, and re-tested in 2012 in three different countries with over 3,000 students aged 10-17.[21] The adaptation was selected for this survey because of both its brevity and generalizability – it consists of seven items measured on a 5-point Likert scale, two of which are reverse-scored. The second one is a standardized satisfaction scale used by Chumney and Ragucci in their study of students enrolled in a dual PharmD/MBA degree program.[22] This scale is more specific to the program itself and includes five items measured on a 5-point Likert scale. The students were asked to reflect specifically on the pharmacy program at The University of Mississippi when answering these questions. The two

[21] Weber, M., Ruch, W., & Huebner, E. S. (2013). Adaptation and initial validation of the German version of the students' life satisfaction scale. *European Journal of Psychological Assessment, 29*(2), 105-112.
[22] Chumney, E.C., & Ragucci, K. R. (2006). Student satisfaction and academic performance in a dual PharmD/MBA degree program. *Am J Pharm Educ, 70*(2).

satisfaction scales were used to differentiate between overall life satisfaction and satisfaction with one's education, capturing an aspect of Gregg's original study in which he measured and compared students' academic satisfaction to their non-academic satisfaction.[1]

RESULTS

Sample

288 surveys were e-mailed to three different classes of pharmacy students at the University of Mississippi. Of 151 surveys received, 132 were usable (12 of which were partial.) Any survey completed in less than 2 minutes was deleted, but it was difficult to determine the average length of time students spent taking the survey because they ranged from a few minutes to a few hours. This is most likely due to the fact that many students took the survey either between classes or between taking notes during classes and had to keep minimizing the survey to continue later.

The third-year Early Entry students (designated 'EE3') make up the smallest of the three classes, numbering only 51. They also had the smallest response rate, for there were only 11 usable surveys from EE3s. The first and second year professional classes ('PY1' and 'PY2," respectively) are of approximately equal size. Of 119 PY1s, 70 usable surveys were submitted, and of 118 PY2s, there were 51 usable surveys. It was not unexpected that the PY1 class had the highest response rate because I'm currently a PY1; because most of my class knows who I am, they may have been more inclined to take the survey.

TABLE I. RESPONSE RATES BY CLASS

Classification	Class Size	Responses
EE3	n=51	n=11 (22%)
PY1	n=119	n=70 (59%)
PY2	n=118	n=51 (43%)
Total:	n=288	n=132 (46%)

92 of the 132 responses (70%) came from female students, and the other 40 responses (30%) came from males. This is a relatively accurate representation of the sample, for all of the classes are predominately female, and current national trends show the average pharmacy school being about two-thirds female.

TABLE II. DEMOGRAPHIC INFORMATION	
Gender	
Male	n=40 (30%)
Female	n=92 (70%)
Classification	
EE3	n=11 (8%)
PY1	n=70 (53%)
PY2	n=51 (39%)

A Kruskal Wallis Test was used to determine whether there was a significant difference in mean ranks of the three different classes' life satisfaction, satisfaction with education, and social involvement. Scale scores were summed in each of these categories. The individual items on each of the different scales were not tested for significance because between class comparisons were not a primary objective of this study. This test was done to better describe the sample and to show whether classification was a contributing factor to any of the dependent variables. Table III shows the mean ranks for each of the dependent variable sums for the individual classes, and there was no significant difference between them.

TABLE III. DEPENDENT VARIABLE VALUES BASED ON CLASSIFICATION

Dependent Variable:	Classification	Mean Rank	Significance
Life Satisfaction	EE3 PY1 PY2	65.35 66.23 52.36	0.112
Satisfaction with Education	EE3 PY1 PY2	72.20 64.07 52.49	0.120
Social Involvement	EE3 PY1 PY2	58.50 67.62 62.61	0.662

The series of yes/no questions shown in Table IV was asked to determine students' involvement and membership in various organizations on campus and within the School of Pharmacy. Because some incomplete surveys were used in this study (depending on whether they completed any of the scales intended to measure the dependent variables), the number of student responses to each of the different questions is indicated in the table to show the changed sample size. These questions were placed near the end to provide a mental break to respondents before being asked to complete the two different scales measuring levels of satisfaction (life satisfaction and satisfaction with education.)

Students were put into one of two groups based on whether they answered 'yes' or 'no' to the questions shown in Table IV, and a Mann Whitney test was performed using students' responses to each of the yes/no questions and each of the different scales used to measure the three dependent variables (life satisfaction, satisfaction with education, and social involvement.)

TABLE IV. ORGANIZATIONAL INVOLVEMENT AND OTHER STUDENT CHARACTERISTICS

	Yes	No
Do you live with another pharmacy student?	n=48	n=82
Are you in a traditional fraternity/sorority on the Oxford campus?	n=32	n=91
Are you in a professional fraternity within the School of Pharmacy?	n=60	n=62
Are you a member of the Honors College?	n=13	n=109
Have you participated in any undergraduate research?	n=28	n=94
Do you have a part-time job during the school year?	n=54	n=68
Are you currently working or have you previously worked in a pharmacy?	n=73	n=49
Are you active in a faith-based student group in Oxford?	n=29	n=93
Are you an officer in any organization on campus?	n=51	n=71

Life Satisfaction

Life satisfaction did not vary significantly based on classification, gender, whether or not a student lived with other pharmacy students, membership in a traditional fraternity/sorority or professional fraternity, whether the student had a part-time job, or whether the student had ever worked in a pharmacy. Students who reported membership in the Honors College, however, had, on average, higher ranks for total life satisfaction in addition to two of the individual items on the satisfaction scale ('I have what I want in life' and 'My life is better than most of my age.') Students who reported being active in faith-based organizations such as the Baptist Student Union (BSU) or Campus Crusade also showed a higher mean rank compared to those who were not active in faith-based organizations for total life satisfaction and two of the individual items ('My life is going well' and 'I have what I want in life.')

The mean ranks for total life satisfaction were not significantly different based on whether a student was an officer in an organization, but a single item on the scale ('I have what I want in life') showed significance (p = 0.037) with those who were officers in organizations having a higher mean rank than those who were not officers.

Because membership in the Honors College and faith-based organizations showed significance for the greatest number of items, the respective mean ranks and levels of significance are shown in Tables V and VI.

TABLE V: MEMBERSHIP IN THE HONORS COLLEGE AND LIFE SATISFACTION

	Mean Rank (Life Satisfaction – Mann Whitney Test)		
Are you a member of the Honors College?	Yes n=12	No n=109	Sig.
My life is going well.	69.75	60.04	0.325
My life is just right.	76.21	59.33	0.093
I would like to change many things in my life.[a]	78.67	59.06	0.060
I wish I had a different kind of life.[a]	68.50	60.17	0.417
I have a good life.	75.88	58.79	0.077
I have what I want in life.	83.00	58.00	0.013*
My life is better than most of my age.	81.96	58.69	0.023*
Sum Total:	84.88	58.37	0.013*

a. Indicates item was reverse-scored * indicates significance

Source: Weber, M., Ruch, W., & Huebner, E. S. (2013). Adaptation and initial validation of the German version of the students' life satisfaction scale. *European Journal of Psychological Assessment, 29*(2), 105-112.

TABLE VI. MEMBERSHIP IN FAITH-BASED ORGANIZATIONS AND LIFE SATISFACTION

	Mean Rank (Life Satisfaction – Mann Whitney Test)		
Are you active in a faith-based student group in Oxford (e.g. BSU, Campus Crusade, etc.)?	Yes n=27	No N=93	Sig.
My life is going well.	73.32	57.29	0.022*
My life is just right.	69.46	58.45	0.122
I would like to change many things in my life.[a]	65.29	59.71	0.450
I wish I had a different kind of life.[a]	67.18	59.14	0.269
I have a good life.	67.72	58.40	0.180
I have what I want in life.	75.86	55.83	0.005*
My life is better than most of my age.	71.68	57.78	0.056
Sum Total:	72.46	57.55	0.048*

a. Indicates item was reverse-scored * indicates significance

Source: Weber, M., Ruch, W., & Huebner, E. S. (2013). Adaptation and initial validation of the german version of the students' life satisfaction scale. *European Journal of Psychological Assessment, 29*(2), 105-112.

Satisfaction with Education

The same yes/no questions used to determine significance between groups for life satisfaction were also used to determine significant differences in students' satisfaction with education. For satisfaction with education only, the individual scale items were used in a Kruskal Wallis test to look for significant differences in mean ranks between the different classes. There was found to be a significant difference ($p = 0.005$) for a single item – 'I would recommend the program to an entering student' – with EE3s actually having the highest mean rank followed by the PY1s, and the PY2s having the lowest mean rank. There was no significant difference based on a student's gender,

whether they were in a traditional/professional fraternity/sorority, membership in the Honors College, participation in undergraduate research, or whether they were an officer in an organization, had previously worked in a pharmacy, or were currently working a part-time job. The students who were in faith-based organizations again showed significantly higher mean ranks for total satisfaction with education and for three of the individual items (see Table VII below).

Table VII. MEMBERSHIP IN FAITH-BASED ORGANIZATIONS AND SATISFACTION WITH EDUCATION

	Mean Rank (Satisfaction with Education – Mann Whitney Test)		
Are you active in a faith-based student group in Oxford (e.g. BSU, Campus Crusade, etc.)?	Yes n=28	No N=92	Sig.
I am satisfied that the program is meeting my needs/goals.	71.79	57.07	0.027*
The level of difficulty of the program is appropriate.	72.46	56.86	0.021*
The individual required courses at the school are appropriate and valuable.	65.50	58.98	0.377
I have had the guidance necessary to complete the program successfully.	66.13	58.79	0.281
I would recommend the program to an entering student.	71.32	57.21	0.042*
Sum Total:	75.96	55.79	0.007*

Note: All items were reverse scored for this scale, because of direction of agreement in numerical assignment * indicates significance

Source: Chumney, E.C., & Ragucci, K. R. (2006). Student satisfaction and academic performance in a dual PharmD/MBA degree program. *Am J Pharm Educ, 70*(2).

Students who lived with other pharmacy students had a significantly higher mean rank for the item 'I am satisfied that the program is meeting my needs/goals' ($p = 0.008$).

Social Involvement

The third and final dependent variable was social involvement. The Mann Whitney test was again used with groupings based on the same set of yes/no questions. There was a significant difference in the mean ranks for at least one item on the social involvement scale for six of the different groupings used. These included gender, membership in a traditional fraternity or sorority, membership in the Honors College, working a part-time job during the school year, membership in a faith-based organization, and being an officer in an organization. Social involvement was not significantly different based on whether students lived with other pharmacy students, were in a professional fraternity within the School of Pharmacy, or had previously participated in undergraduate research.

As mentioned previously, there were a few sporadic significant findings for individual items on the social involvement scale based on involvement in extracurricular activities. Students in traditional fraternities and sororities had a statistically significantly higher mean rank ($p = 0.023$) for 'ease of developing close friendships with female students' but significantly lower mean rank ($p = 0.010$) in terms of satisfaction with social life compared to students who were not members of traditional Greek life. Members of the Honors College had a higher mean rank for frequency of feelings of inclusion while those working part-time jobs had a lower mean rank for frequency of feelings of isolation. Concerning the same item, females actually had (on average) significantly higher ranks for frequency of feelings of isolation, and they also had a lower mean rank for satisfaction with social life. Students who were officers in organizations had a higher mean rank for feeling like a part of the 'Pharm Phamily.'

Again, membership in a faith-based organization was the only significant predictor of total social involvement. It was the only independent variable measured that showed statistical significance for each of the three dependent variables included in the primary objectives of this study. Membership showed statistical significance for two of the individual items on the scale in addition to the total. The two items included satisfaction with 'availability of social activities' and 'interactions with other students.' Table VIII shows all of the items included in the social involvement scale as well as the relevant mean ranks for variables related to peer interactions.

Because the results of the Mann Whitney test for membership in faith-based organizations are shown in tables for both satisfaction scales, Table VIII shows the results of the Mann Whitney test based on students' responses to a Likert scale question concerning the degree to which a student agreed or disagreed with the statement, 'Most of my good friends are in Pharmacy School.'

Student-Student Interactions

This particular test grouping students based on their response to this item is a good place to introduce and transition into the second set of analyses that group students based on their responses to some of the more complex questions, sometimes involving the nature of their relationships with the rest of the students in their class and other times concerning the nature of their relationships with their faculty. These tests were conducted similarly to the ones previously described, sometimes using each of the different possible levels of ordinal responses and sometimes only using a couple (for example, only using 'agree'

and ‘disagree’) to determine if the same significant differences are there when the extremes on either end of the scale are excluded.

For example, for the statement shown in Table VIII, they responded on a 5-point scale where 1 = ‘Strongly Disagree’ and 5 = ‘Strongly Agree’ (see Figure II). Instead of using all five response groups, the extreme and the neutral responses were excluded (creating samples of approximately equal size), and the Mann Whitney test was used, grouping the smaller sample of students based on whether they selected ‘2’ for ‘Disagree’ or ‘4’ for ‘Agree.’ The two groups included 25 and 32 students respectively (as indicated in Table VIII.)

TABLE VIII. SOCIAL INVOLVEMENT AND PEER INTERACTIONS

	Mean Rank (Social Involvement – Mann Whitney Test) 'Most of my good friends are in Pharmacy School.'			
Please provide your opinions on each of the following statements, using the scale where 1=Strongly Disagree to 5=Strongly Agree. Consider your current circle of friends.	2 = Disagree n=25	4 = Agree n=32		
Since entering the School of Pharmacy, how often have you felt…	Mean Rank		Sig.	Sig[a]
Isolated from things going on around you?	27.78	29.95	0.579	0.403
Included in things going on around you?	24.40	31.81	0.047*	0.051
Since entering the School of Pharmacy, how easy has it been to develop close friendships with…				
Female students?	25.16	32.00	0.090	0.008*
Male students?	23.00	33.69	0.010*	0.006*
Please rate your satisfaction with your School of Pharmacy experience thus far in terms of your…				
Interactions with other students.	21.08	35.19	0.001*	<0.001*
Availability of social activities.	25.72	31.56	0.138	0.125
Social life.	24.34	32.64	0.045*	0.069
Overall sense of community.	23.82	33.05	0.024*	0.016*
Indicate the extent to which you agree or disagree with the statement, "I see myself as part of the 'Pharm Phamily.'"	20.76	35.44	<0.001*	<0.001*
Sum Total:	20.76	35.44	0.001*	<0.001*

a. The column on the far right indicates the significance for the same test but including the students who 'Strongly Disagree' (n=4) and 'Strongly Agree' (n=29)

Source: Sharkness, J., DeAngelo, L. (2011). Measuring student involvement: a comparison of classical test theory and item response theory in the construction of scales from student surveys. *Red High Educ, 52*:480-507.

There was no significant difference between the mean ranks for total life satisfaction or satisfaction with education. The only individual item that showed significance on either of these scales was on the life satisfaction scale – 'My life is better than most of my age.' The p-value decreased from $p = 0.005$ to $p = 0.001$ after including the extremes in the sample. For the social involvement scale, however, six of the nine individual items showed significance as well as the total (see Table VIII). The items that were not significant included frequency of feelings of isolation, ease of developing relationships with female students, and satisfaction with availability of social activities. The significant items are indicated in Table VIII – the second p-value shown in the far right column of the table contains the significance of the items when including the students who responded that they 'strongly agreed' or 'strongly disagreed.'

Before grouping students according to these types of responses and providing the results of the statistical tests, it may be useful to show graphically how the sample as a whole responded to a series of questions concerning their relationships with the people they live with, go to class with, and consider their friends.

FIGURE 2

"I have a lot of good friends in college who are not in pharmacy school."

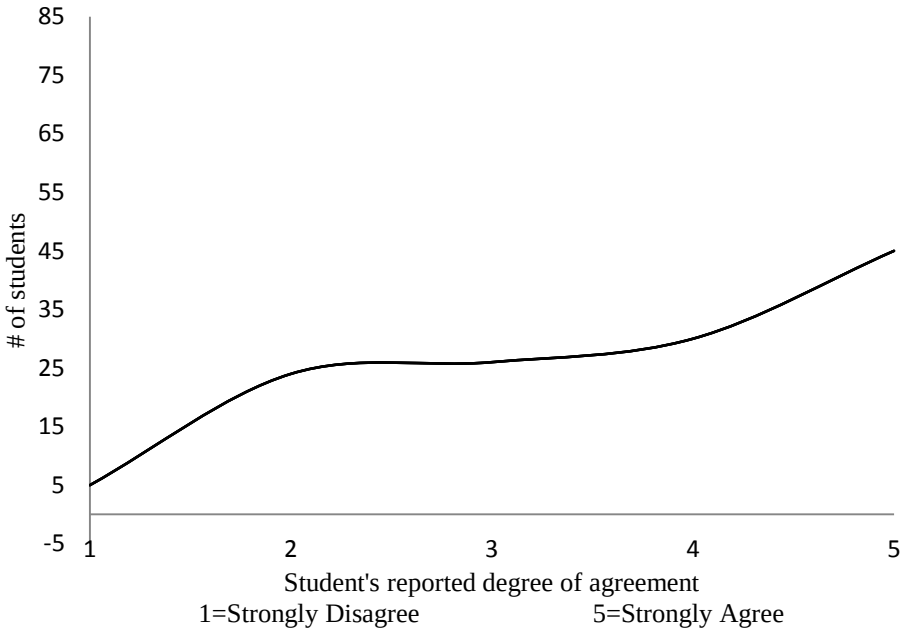


FIGURE 3

"Most of my good friends are in pharmacy school."

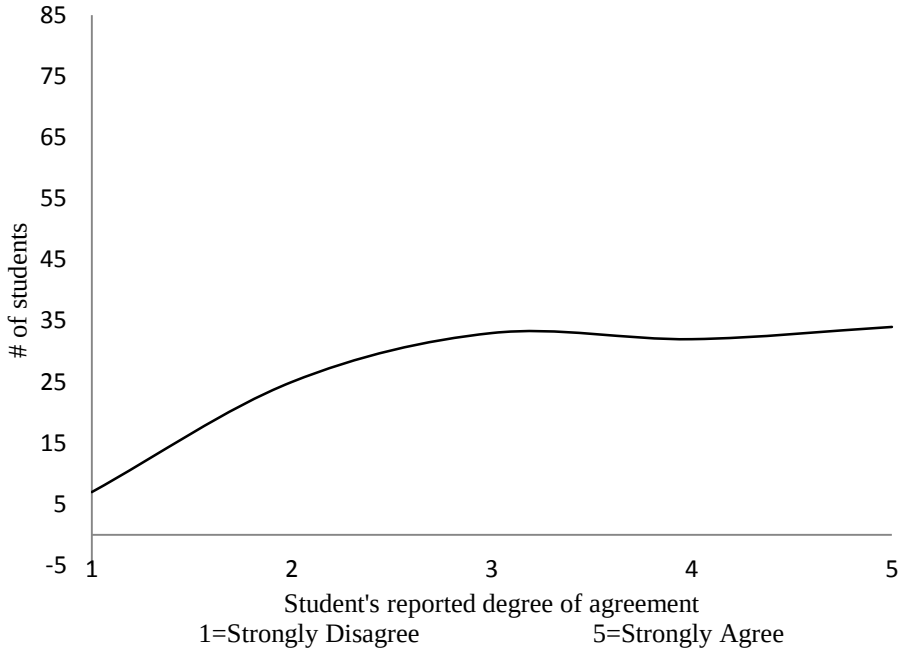


FIGURE 4

"None of my good friends are in pharmacy school."

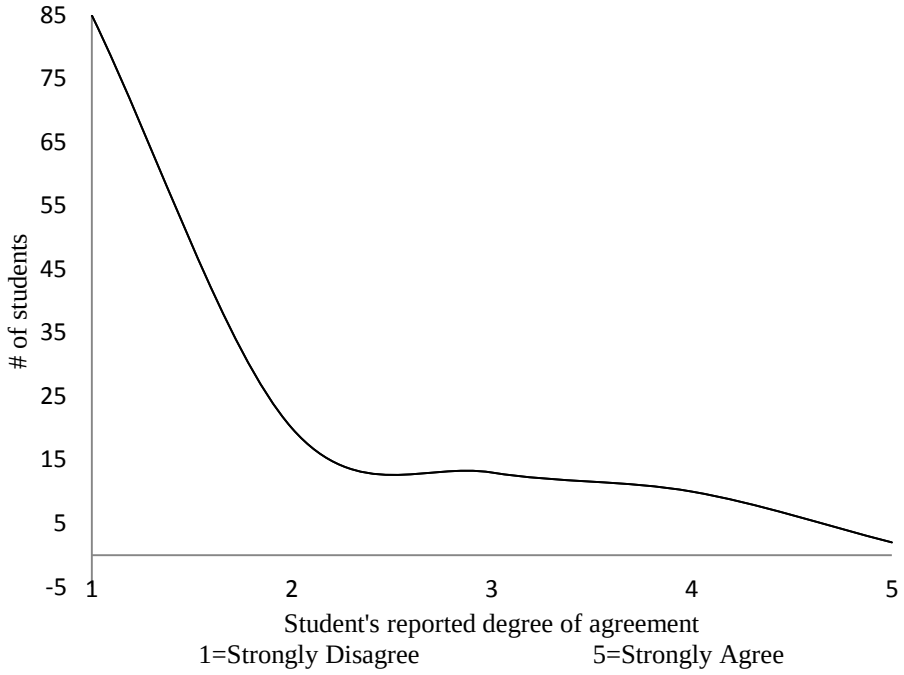


FIGURE 5

"I don't spend any time with my classmates outside of class."

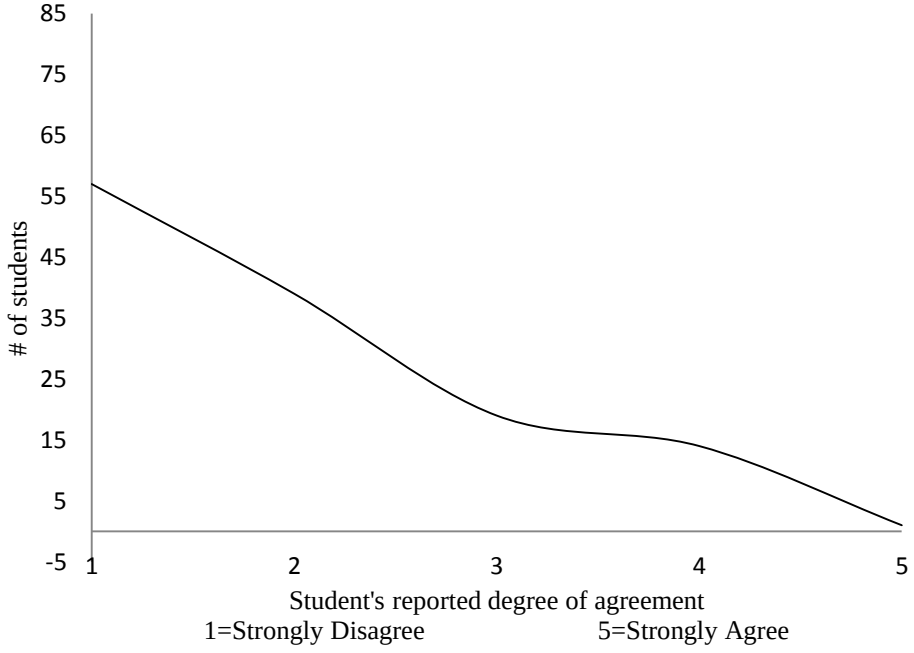
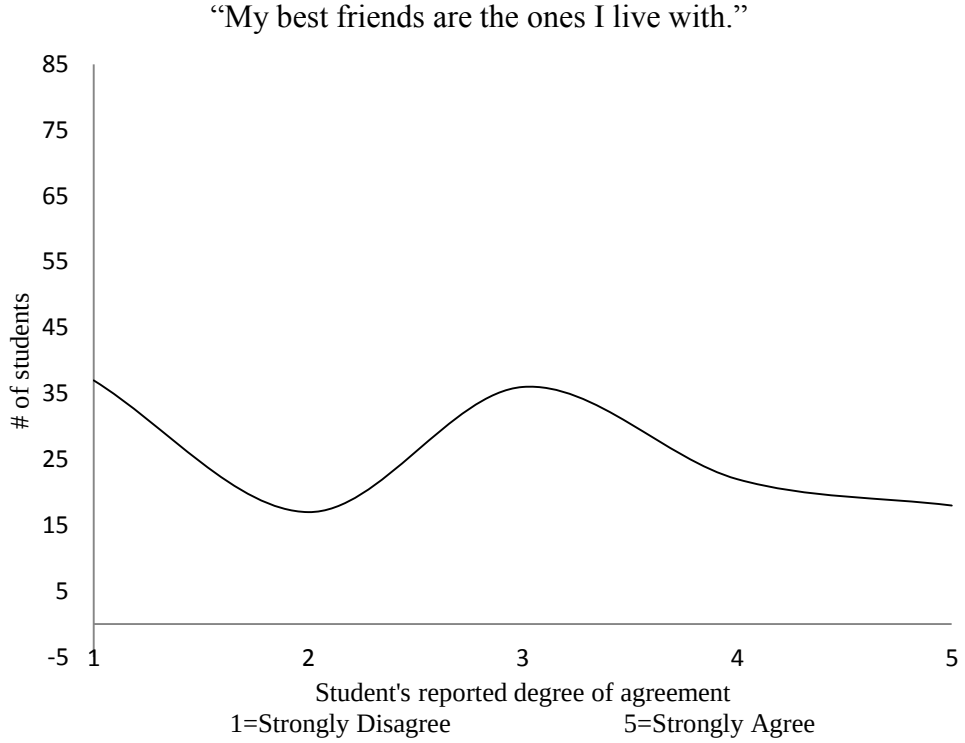


FIGURE 6



There was no significant difference in any of the responses depicted in Figures 2 through 6 based on classification.

A Mann Whitney test was used to test for a significant difference in the mean ranks for the responses depicted in Figure 6 ('My best friends are the ones I live with') between students who live with other pharmacy students (n=48) and students who do not live with other pharmacy students (n=80). Students who live with other pharmacy students had significantly higher ($p = 0.006$) mean ranks than those who did not live with other pharmacy students (75.86 compared to 57.68).

FIGURE 7

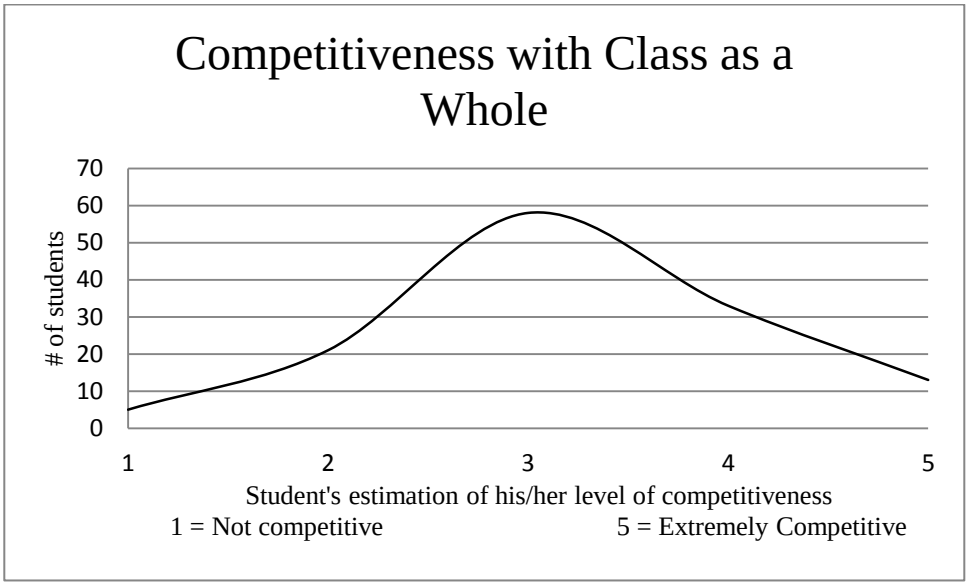
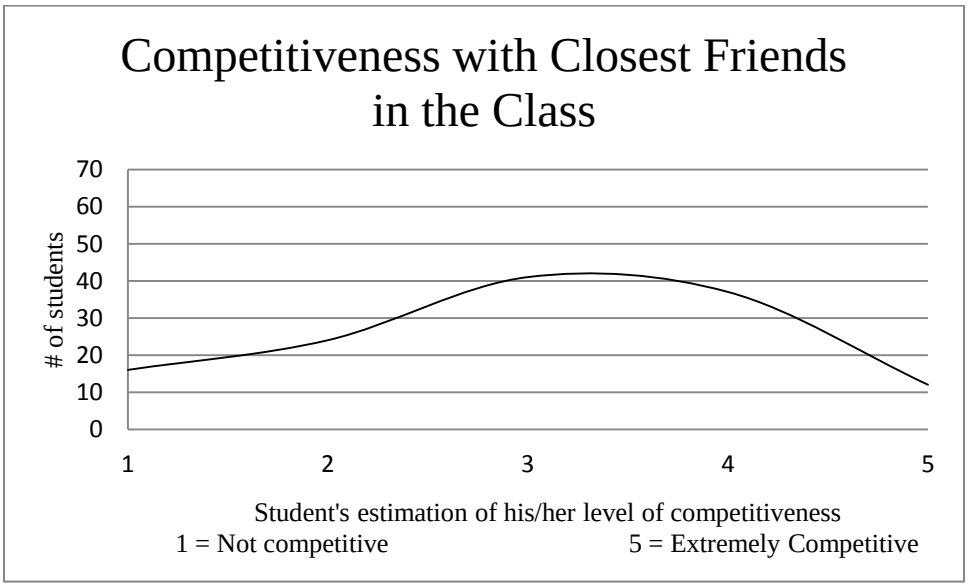


FIGURE 8

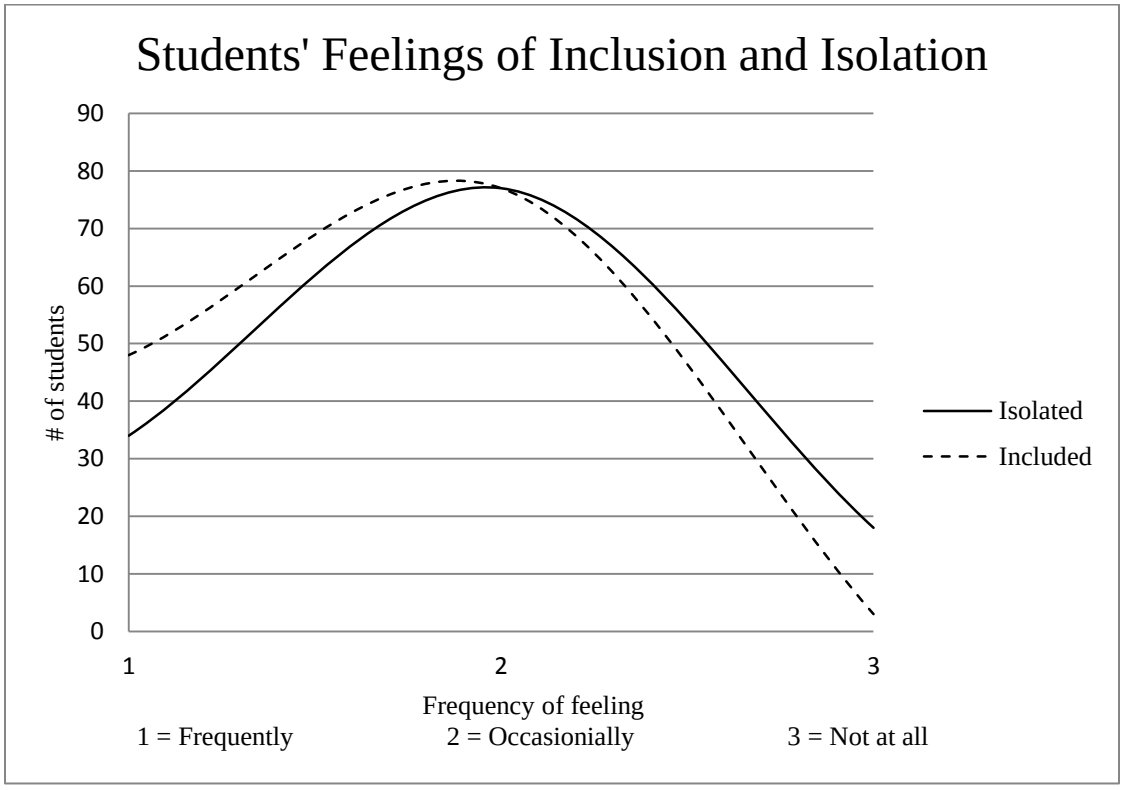


The mean levels of competitiveness with both closest friends and the rest of the class were closest to 3, or 'neutral' – there was no significant difference in level of competitiveness based on classification ($p = .077$ for Figure 7 and $p = 0.508$ for Figure 8.) Figure 8 shows that students' responses to 'competitiveness with the rest of the class'

were more heavily concentrated toward the middle with a lower standard deviation. There was not a significant difference between competitive and non-competitive students' reported levels of life satisfaction, satisfaction with education, or social involvement.

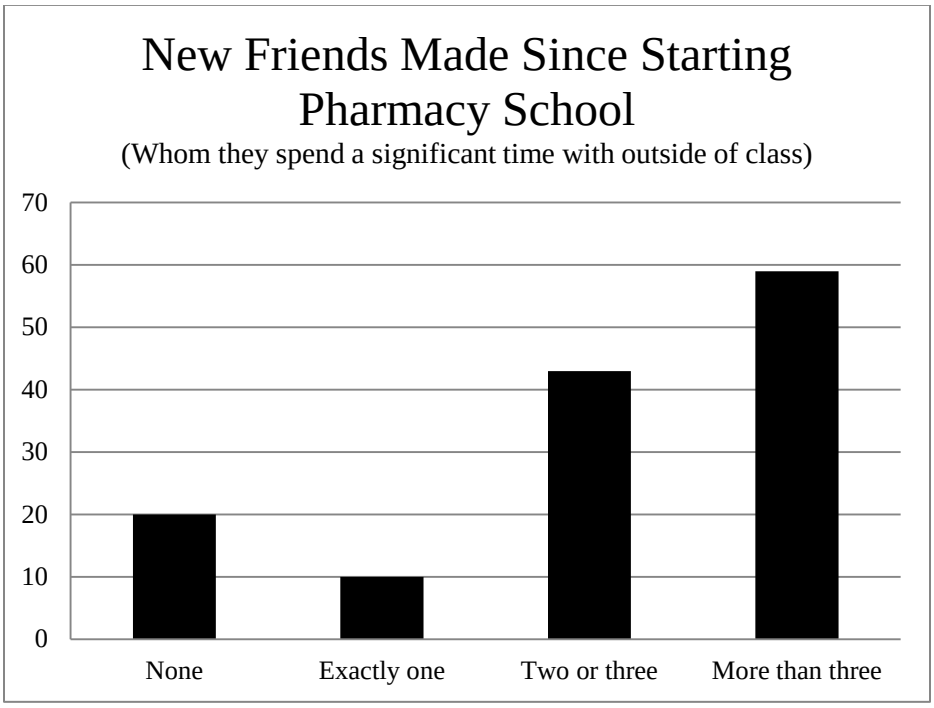
The students who reported being 'extremely competitive' with their closest friends in the class had a significantly higher mean rank for satisfaction with 'overall sense of community among students' ($p = 0.014$), but there was no significant difference in the mean ranks based on varying levels of competitiveness with the class as a whole.

FIGURE 9



The two frequency curves for students' self-reported feelings of isolation and inclusion intersect at y = 77 students, the number of students who reported feeling 'occasionally' isolated as well as the number of students who reported feeling 'occasionally' included.

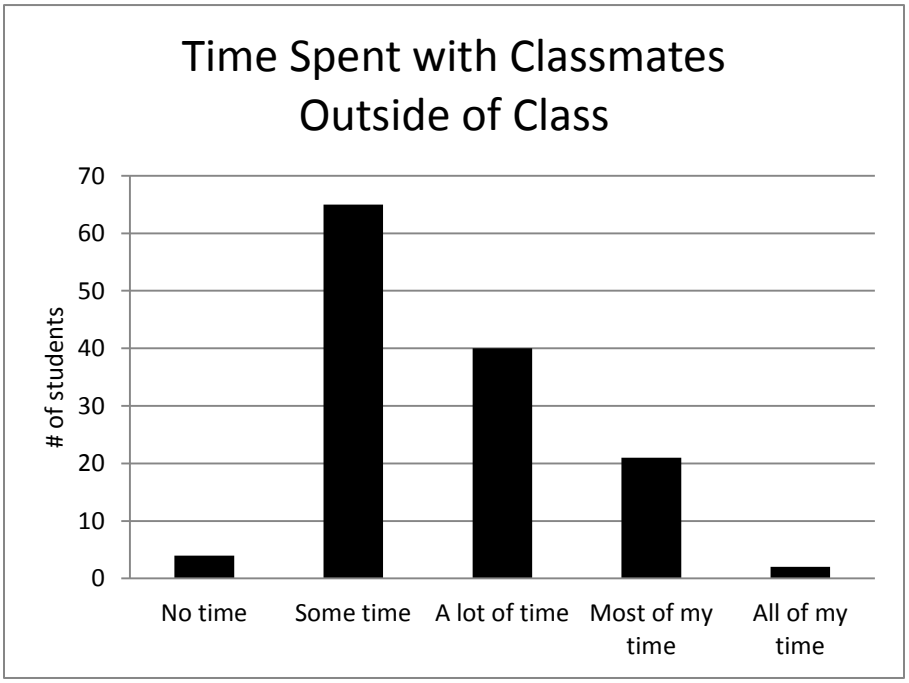
FIGURE 10



55% of the sample has only made three or fewer friends whom they spend a significant amount of time with outside of class since starting pharmacy school. Because roughly half of the sample said they spend a significant amount of time with more than three people they've met since beginning pharmacy school and half said they only spend time outside of class with three or fewer, a Mann Whitney test was used to compare the two groups' satisfaction and involvement. Students who have made more than three friends had a statistically higher mean rank for the 'Pharm Phamily' item ($p = 0.010$) and a lower mean rank in terms of their agreement that the level of difficulty of the program is appropriate ($p = 0.031$).

The same test was used again to compare the students who have made two or three friends to the students who have made more than three friends to see if the same trend held true when the responses of the two groups pictured on the left half of Figure 10 were excluded (in case the responses from the students who have made no friends or only one friend were skewing the data). The respondents who have made more than three friends again agreed more strongly that they saw themselves as part of the Pharm Phamily ($p = 0.042$), but there was no significant difference in the item concerning the difficulty of the program. In addition, the students who have made more than three friends were, on average, more satisfied with their social life ($p = 0.036$) and had a higher mean rank for total social involvement ($p = 0.040$) compared to students who have made fewer new friends. The p-values for these same items that did not prove significant for the tests in the previous paragraph were 0.082 and 0.055, respectively.

FIGURE 11



Because of the distribution pictured in Figure 11, the students who said they spend ‘no time’ or ‘some time’ with their classmates outside of class (n=69) were compared to the students who claimed to spend a lot of their time, most of their time, or in a few cases, all of their time outside of class with their classmates (n=63). This particular cut-off was chosen because it divided the students into two groups of approximately equal sample size.

Based on the results of a Mann Whitney test, the students who spend more time with their classmates outside of class reported greater ease of developing close friendships with both males ($p = 0.003$) and females ($p = 0.002$) in their class and had statistically significant higher mean ranks in terms of their satisfaction with their interactions with other students ($p = <0.001$), availability of social activities ($p = 0.002$), and the overall sense of community between students ($p = 0.006$). The levels of significance for both their feelings of belonging to the Pharm Phamily and their total social involvement were < 0.001, with students who spend more time with their classmates outside of class having higher mean ranks for both.

In terms of life satisfaction, students who spend less time with their classmates expressed greater agreement (on average) that they would like to change many things in their lives (0.005), and they had a significantly lower mean rank for the item, ‘My life is better than most of my age’ ($p = 0.026$).

FIGURE 12

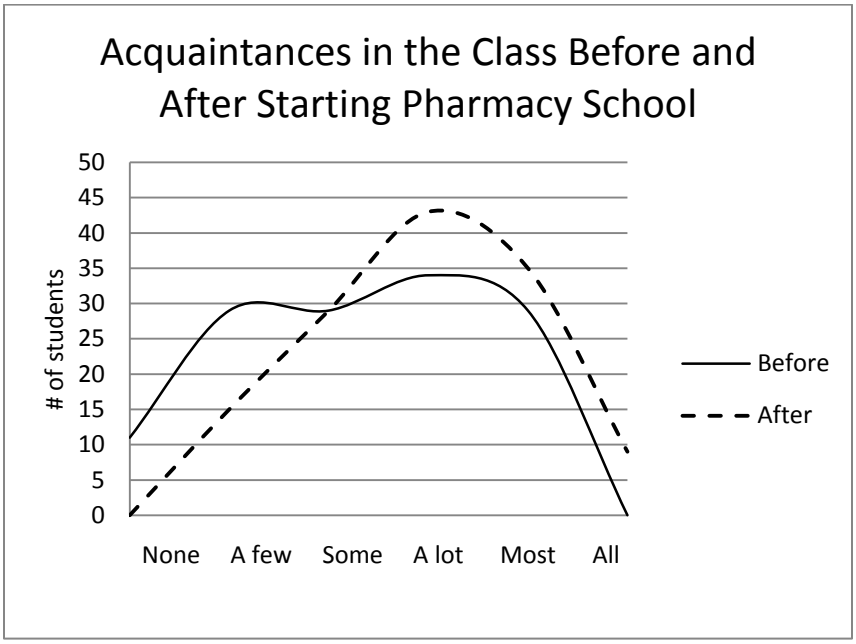


FIGURE 13

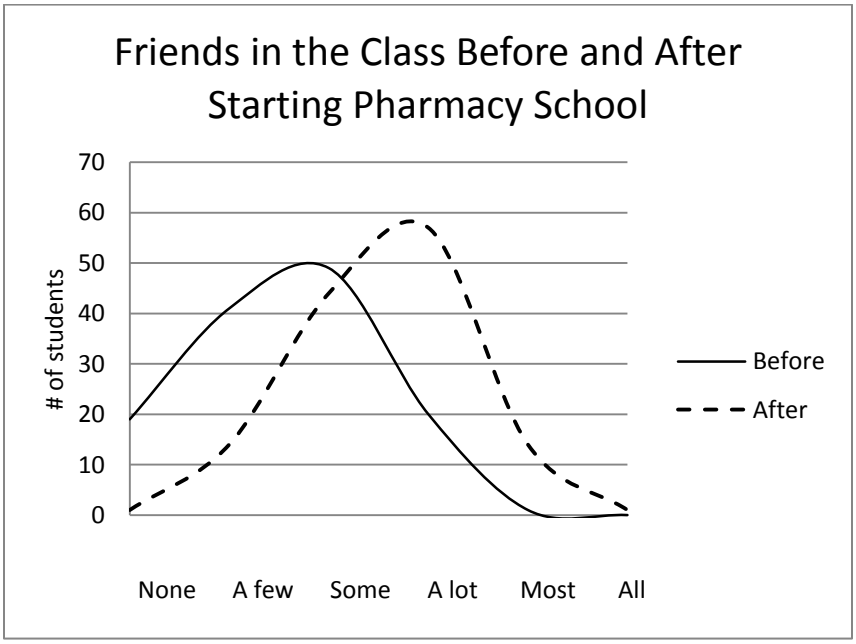


FIGURE 14

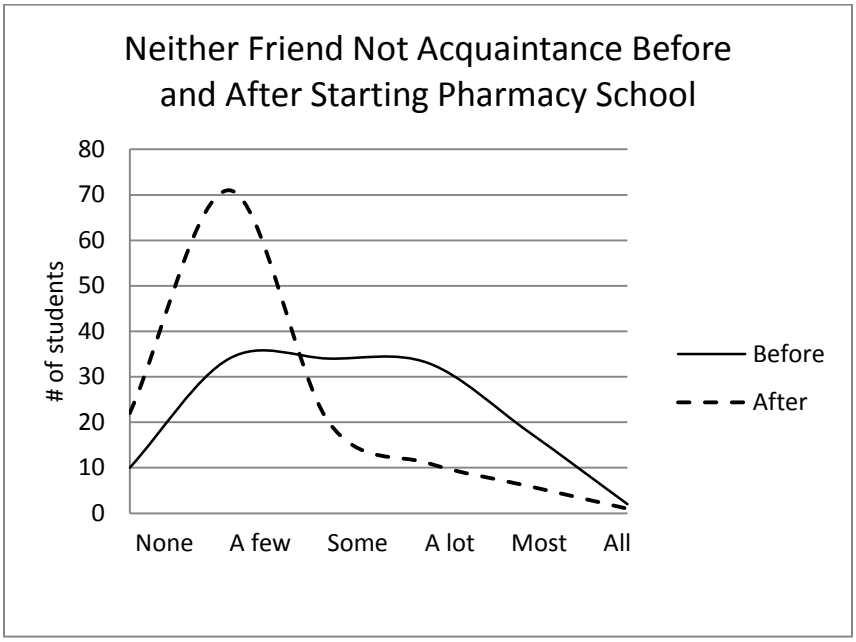
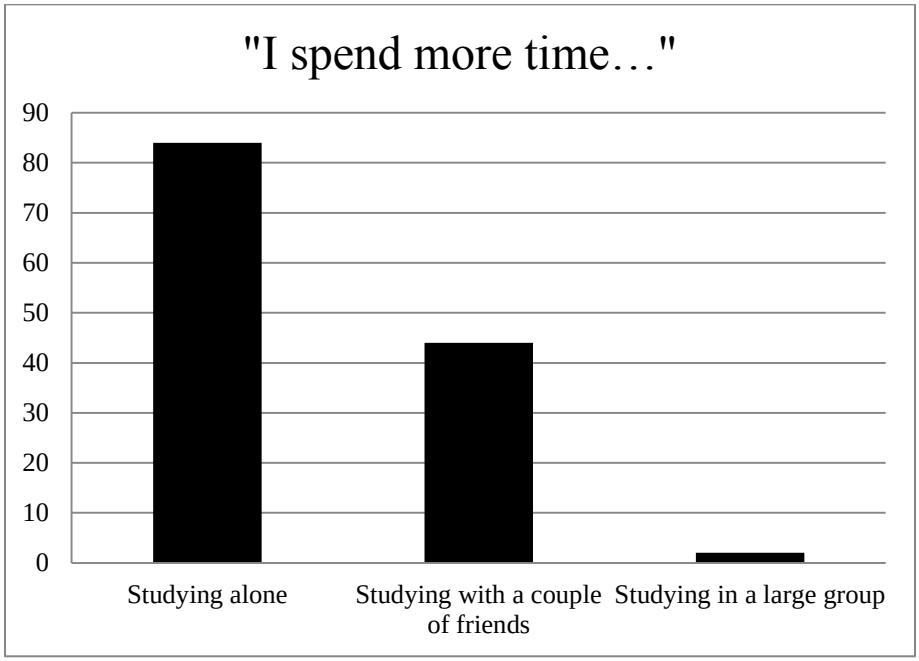


FIGURE 15



Regarding study time, 65% spend more time studying alone, 34% spend more time studying with a couple of friends, and 2% spend more time studying in a larger group.

Because there were only two people who said they spend more time studying in a large group, a Mann Whitney test was used to compare students' responses who spend more time studying alone (n=84) to students' responses who spend more time studying with a couple of friends (n=44). There was no difference for life satisfaction or satisfaction with education (or any of the two scales' individual items), but students who spend more time studying with a couple of friends had a significantly higher mean rank for the items concerning feelings of belonging to the 'Pharm Phamily' ($p < 0.001$), satisfaction with both availability of social activities ($p = 0.002$) and interactions with other students ($p = 0.030$), ease of developing relationships with male students ($p = 0.016$), and total social involvement ($p = 0.004$).

Time Spent Physically in the Pharmacy Building

The students who reported being in the pharmacy building "for classes only" had significantly lower mean ranks for both total social involvement ($p = 0.004$) and life satisfaction ($p = 0.034$). In terms of their social involvement, they were (on average) less satisfied with their interactions with other students ($p = 0.030$), availability of social activities ($p = 0.016$), and social life ($p = 0.004$), and they had a significantly lower mean rank for the Pharm Phamily item ($p = 0.009$). For the life satisfaction scale, these students had significantly lower mean ranks in terms of their degree of agreement with the statements, 'My life is going well' ($p = 0.001$) and 'I have a good life' ($p = 0.029$). (NOTE: There were a few students who checked the box to indicate that they were

physically in the pharmacy building "for classes only" and then proceeded to check more boxes to indicate that they were also in the pharmacy building for other activities.)

Students who said they were in the pharmacy school for more than just classes said they were there to study on weekends, attend meetings for different organizations, and even to use the School's bathrooms on game days.

Student-Faculty Interactions

44% of students considered their meetings with professors to be formal, and 53% considered their meetings with professors to be more informal. Four students said they do not meet with their professors. The Mann Whitney test was used, grouping students based on the nature of their interactions with professors (informal vs. formal), but there was no significant difference in any of the dependent variables or their individual scale items. There was also no significant difference based on a student's classification.

While the number of professors recognizing a student's face was not a significant predictor of satisfaction or involvement, there was a significant relationship ($p = 0.028$) between how many of a student's professors know his or her name and his degree of agreement with the item 'I have had the necessary guidance to complete the program successfully.' The students who said all of their professors know their name (n=6) had the lowest mean rank for this item, and despite an almost equally as small percentage of students claiming none of their professors knew their name (n=4), the other three categories shown in the table below all had similar mean ranks.

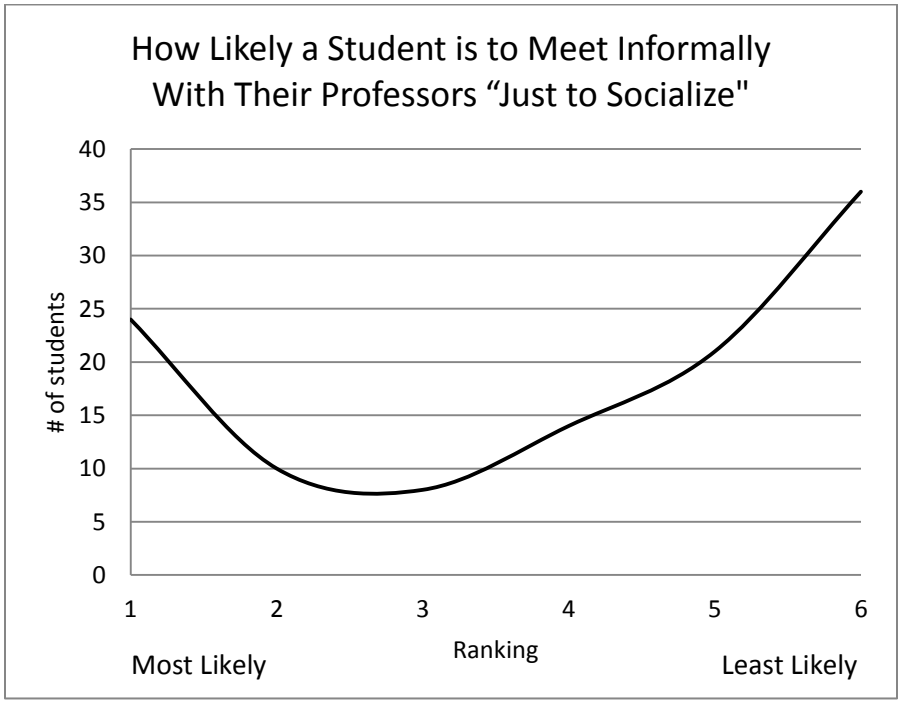
TABLE IX. PROFESSOR FAMILIARITY AND GUIDANCE

Number of professors the student claims knows his/her name:	Number of students:	Mean Rank
None	n=4	63.38
One	n=22	63.39
More than one	n=88	62.08
All	n=6	22.83

Students perceived the faculty to have a greater influence on their intellectual development compared to their personal development. The majority of students reported being most likely to meet informally with a professor about "academic or course information" or to "discuss career concerns." They were asked to rank six different items in order of what they were most likely to meet with a professor about, and five of the items' distributions had a single peak and were skewed either left or right. The item that was an anomaly, however, was "just to socialize," and its distribution is pictured in Figure 16.

The other three items they were asked to rank included: "discuss campus issues," "resolve a personal problem," and "discuss intellectual matters."

FIGURE 16



Quantitative Data

The survey gave students several opportunities to input or select specific numbers indicating either average hours or days/nights they spend in specific activities. Because of the wide variability and range of such responses, most of the quantitative data was then put into intervals for analysis purposes. The intervals were as follows:

On average, how many nights do you ‘go out’ during a month?

Intervals: 0-2 nights, 3-5 nights, 6-8 nights, and 9+ nights

On average, how many days a week do you exercise?

Intervals: 0-2 days, 3 or 4 days, or 5+ days

GPA:

Intervals: < 3.00, 3.00-3.49, ≥ 3.50

On average, how many hours a day do you study?

Intervals: 0-2 hours, 3-5 hours, 6-8 hours, 9+ hours

If you answered yes to having a part-time job during the school year, approximately how many hours do you work in an average week?

Intervals: 0-4 hours, 5-9 hours, 10-14 hours, 15+ hours

Grouping students according to the intervals defined above revealed no significant differences between a student's life satisfaction, educational satisfaction, or social involvement. The number of organizations a student reported membership in was the only question where the responses were organized into intervals that revealed a significant difference in any of the dependent variables.

"Organizational involvement" has been used loosely to refer to any student involvement or membership in groups campus-wide and within the School of Pharmacy. The number of organizations students belonged to range from zero to eight, so four intervals were created. (See Table X for defined intervals and number of students belonging to each one.)

TABLE X. MEMBERSHIP IN ORGANIZATIONS

Number of Organizations	Number of Students
0 or 1	n=20
2 or 3	n=51
4 or 5	n=35
More than 5	n=12

Students who were not in any organizations or who were only in one had the lowest mean ranks for ease of developing relationships with females ($p = 0.038$), satisfaction with interactions with students ($p = 0.033$), feelings of belonging to the Pharm Phamily (the most significant difference [$p = 0.002$]), and degree of agreement with whether they have what they want in life ($p = 0.021$). The significant differences concerning the items on the satisfaction with education scale were a little more complex, with students who were in zero or one organizations actually having the highest mean rank for having the necessary guidance to complete the program, followed by those who were members of more than five, and the students in the middle two intervals actually having the lowest ($p = 0.018$). The students in the middle two intervals again had the lowest mean rank for whether they would recommend the program to an entering student ($p = 0.021$), but for this item, the students who were in five or more organizations again had the highest mean rank.

Not all of the quantitative data was divided into intervals. The relationship between 'average hours of sleep per night' and life satisfaction, satisfaction with education, and social involvement was examined using a bivariate analysis. There was no significant relationship between hours of sleep and any of the dependent variables of interest.

TABLE XI. AVERAGE NUMBER OF HOURS PER DAY SPENT IN VARIOUS ACTIVITIES

Activity	Average Hours/Day
Sleeping	7.28
Studying	4.03
Socializing	2.04
Exercising	0.93

The averages shown in Table XI were calculated based on values students were either asked to type into a box (could be any number from 0-24) or, in the case of studying, to indicate by moving a slider on a horizontal number line. For the values students were asked to type into boxes, all of the numbers had to add up to twenty-four hours. Not all of the different activities provided were variables of interest; they were only included in the question to make the student taking the survey consider the time they spend eating, watching TV, playing intramurals, etc.

The same variables were examined using a slightly different method for reporting – students were asked to rank the same activities listed in Table XI in order of what they spend the most time doing to what they spend the least time doing. (These questions were only separated by a single question in the survey.) Studying was most frequently placed at the top to represent the activity the student spends the most time doing, with 63 students ranking it number one. Most students said they exercise the least (85 students ranked it last). The activity most often selected for the second spot was sleeping, and socializing was ranked third for a majority of students.

Because of the conflicting results between the two different types of questions asking virtually the same thing, I added each student's values for 'Academics by myself' and 'Academics with others' to create an average hours of studying per day and compared it to the number he put to represent the average number of hours he sleeps per day. Despite 60% of the sample saying they study more than they sleep, only 20% of the sample actually reflected this in the numeric answers they provided two questions later.

Correlations Between Satisfaction and Social Involvement

The relationships between the three dependent variables (life satisfaction, satisfaction with education, and social involvement) were also tested for significance in order to examine relationships proposed in Figure 1 (page 11). Three bivariate analyses were conducted, and the results are displayed in Figures 17 - 19. All three analyses revealed significant correlations at the 0.01 level of significance. Life satisfaction and social involvement were the most significantly correlated ($p < 0.001$) with a Pearson correlation coefficient of 0.450, representing a strong positive linear relationship. Life satisfaction and satisfaction with education had the next strongest relationship with a Pearson correlation coefficient of 0.352, showing only a moderate strength relationship but also with significance less than 0.001. The Pearson correlation coefficient was the lowest and least significant ($p = 0.003$) for the relationship between social involvement and satisfaction with education, having a correlation coefficient of only 0.274, indicating a weak linear relationship.

FIGURE 17. LIFE SATISFACTION AND SOCIAL INVOLVEMENT

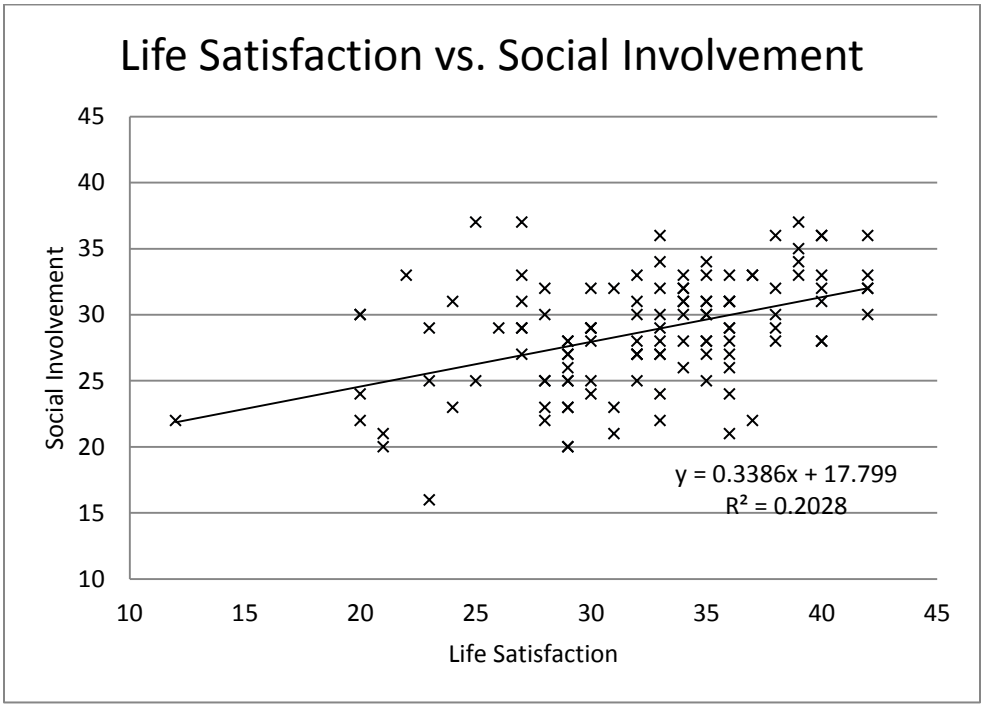


FIGURE 18. SATISFACTION WITH LIFE AND EDUCATION

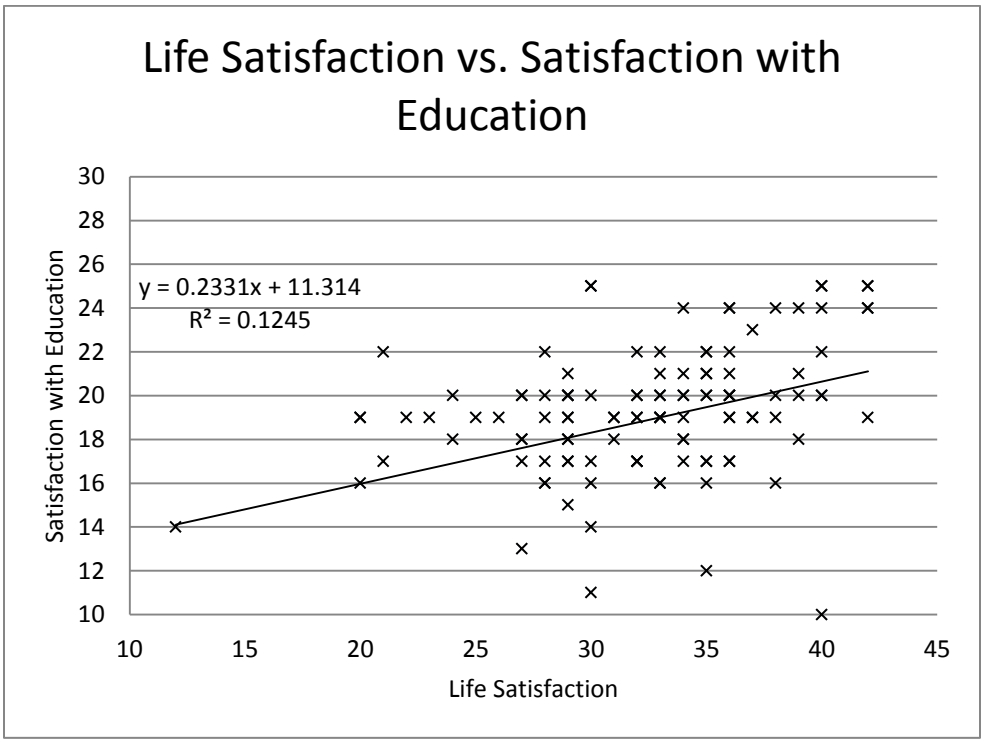
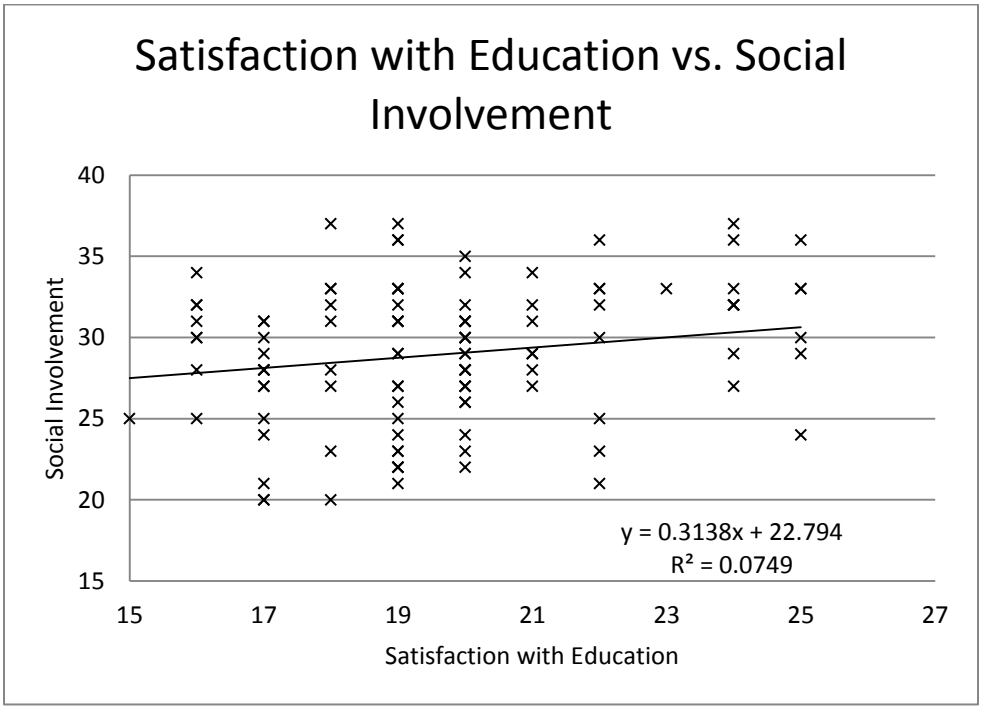


FIGURE 19. SATISFACTION WITH EDUCATION AND SOCIAL INVOLVEMENT



DISCUSSION

Interpretation

Based on the results of this study, it would seem that one of the biggest opportunities for students and faculty to improve the student body's satisfaction lies indirectly in increasing individuals' relational involvement, whether within or outside the School of Pharmacy. The fact that more than half of the students surveyed only spend time outside of class with fewer than three of their classmates despite the professional classes consisting of almost 120 students shows a lack of either desire or opportunity to develop close friendships with classmates. Being a member of the PY1 class, this percentage was not surprising; I sit in the back of the classroom and have witnessed firsthand the number of students who sit in the exact same seat day after day between the same two people.

The significant findings concerning the students who reported spending less time with their classmates outside of class suggest a lack of opportunity rather than lack of desire. The fact that students who do not spend as much time with their classmates reported more difficulty developing close friendships with them and were more dissatisfied with the availability of social activities could indicate that students want to be more involved with their classmates. The nature of the items showing significance – 'My life is better than most of my age' and 'I would like to change many things in my life' - on the life satisfaction scale could also provide support for this viewpoint because when a student claims his life is better or worse than most of his age, he is likely considering the people he sees regularly, perhaps comparing his life to the lives of his classmates around him. The language of the second item, "would like to," implies that they would change

something if they felt that they could, so how do we help students make the changes they wish to see in their lives?

The sheer size of the professional classes could serve as an intimidation factor and potential barrier to developing relationships with classmates, but this could potentially be overcome by encouraging students to work in smaller teams of ten or so students whom they get to select themselves. Randomly assigned groups could potentially increase a students' chance of feeling isolated because they may not know a single person in the group. However, if students are allowed to pick at least a couple other students to work with, these smaller "friend-groups" could be merged thus forming a larger group of "known" classmates.

Interestingly, the two curves representing students' frequency of feelings of isolation and inclusion were surprisingly similar. The fact that the same number of students (which was more than half of the entire sample in both cases) reported feeling 'occasionally' isolated and 'occasionally' included was surprising but validated the decision to incorporate the additional item into the social involvement scale because the item concerning inclusion was added specifically to demonstrate that lack of feelings of isolation do not necessarily translate to feelings of inclusion. The fact that a majority of students are not frequently feeling included in things going on around them within the School of Pharmacy is another indication that there could be an increased sense of community among students, despite a majority of students reporting being satisfied with the present one.

I think this apparent disconnect between the realities of student experiences and their total satisfaction scores is a direct result of the apathetic attitude possessed by some of the professional students. The students are not particularly dissatisfied, nor are they 'very satisfied.' School is the number one priority for most if not all of the students surveyed, and one would only need to be in the building for a day to hear comments such as, "Hey, I'm just here to pass." Students don't pay tuition to go to pharmacy school solely (or even primarily) to make friends or attend their relatively small social functions on weeknights, and students might not realize the impact that having a couple more good friends to consistently rely on within the same program could have on their educational experience.

This distorted reality is especially evident when considering students' reported hours spent in specific activities. Sixty percent of the sample claimed they studied more than they slept when asked to rank a few activities based on what they spend the most time doing to what the spend the least time doing, but exactly two questions later when respondents were asked to provide the average number of hours they spend in a variety of activities each day, only twenty percent of the respondents actually typed a higher number in the box corresponding to hours spent studying compared to hours spent sleeping. The fact that almost half of the students surveyed *feel* like they're studying more than they actually are is not particularly surprising but could be indicative of a prevailing negative and perhaps weary attitude held by many of the students.

Interestingly, half of the students consider their interactions with professors to be formal, and half of the students perceive them to be more informal. Because there was found to be no significant difference based on students' classification, it shows that students of the

same class who have all of the same teachers are perceiving what could be very similar interactions in very different ways. Because the teachers are a constant, some aspect of the students themselves is the most likely determinant of the tone of the meeting, whether their formal mannerisms encourage slightly more formal behavior on their teacher's part or maybe they just have a tendency to generalize and perceive all interactions in a very specific, pre-determined way. Students' different attitudes and expectations could shape their interactions with their teachers into either formal or informal, or even positive or negative, experiences. That idea could be supported by the fact that the few students who indicated that all of their professors knew their names were the most dissatisfied with the level of guidance they've received; perhaps those students expect too much of their professors or are too critical of their performance.

Another potential explanation is suggested by the figure showing students' ranking for what they are most likely to meet with a professor informally about. "Just to socialize" had a unique curve in that the two extremes had the two highest frequencies. Based on the trends in the other items, one would have expected the curve to have a single speak, perhaps skewed slightly to the right since such an overwhelming number of students responded similarly for their top two items. This could be a result of the wording used in the question – because it asked students what they were most likely to meet informally with a professor about, some students might have perceived the other topics to be more formal by nature and thus selected "just to socialize" as their number one choice because they perceived the item's very diction to be inherently suggestive of informality.

People's varying perceptions of the world and their part and place in it are impossible to control for in any study, but they may account for some of the more significant findings

in this one. The most obvious finding involves a relatively small set of students who are involved in a faith-based group; this is also one of the more difficult if not impossible relationships to discuss and even attempt to explain. The students of faith-based groups such as BSU and Campus Crusade might be more accustomed to thinking of themselves as a necessary part of a whole, something much bigger than themselves, and consequently, they might have more positive outlooks and an enhanced ability to think about the big picture, having greater priorities and purpose than just getting through school.

Holistic medicine (considered a part of complementary and alternative medicine) targets the healing of the mind, body, and spirit. Just as engaging in a holistic approach to health and wellness may better meet the needs of many in the patient population, these groups may provide students with a sense of engaging in activities that they may feel more completely address their holistic purpose. In the context of Maslow's Hierarchy of Needs, such groups with broader service orientations (beyond academic degree-seeking activities) may be aiding the students to feel closer to the "self-actualization" apex of the hierarchy pyramid. Suggesting that all entering pharmacy students get involved in a faith-based organization is neither appropriate nor likely, however. An alternative approach to consider (which could easily be recommended to an entering student) might include exercises such as meditation and yoga.

In terms of making recommendations to future students (which was a long-term goal of this study), the most easily implementable suggestion would be to simply spend more time in the pharmacy building. This finding is in direct support of Astin's Student Involvement Theory because he argued that how present a student is in his school or

University is directly related to how satisfied he is, and there isn't anything that more directly or literally relates to presence within the pharmacy program here than physically being in the building; encouraging students to spend more time in the building (even if it's just between classes) is feasible and has real potential to improve students' experiences.

The complexity of relationships observed in this study was not wholly anticipated by the framework outlined in Figure 1. Peer interactions proved a significant contributor to social involvement, and were directly correlated with life satisfaction. I proposed that the greatest opportunity for students and faculty to increase student satisfaction is indirectly through social involvement. To add to that, I think a student's single greatest opportunity to accomplish higher satisfaction is through increasing meaningful interactions with a wider circle of peers, making more of an effort to "phoster the Pharm Phamily" and to pursue goals beyond good grades and oneself, striving for whatever he or she perceives to be at the top of that metaphorical pyramid Maslow proposed seventy years ago.

In my opinion, one of the most significant findings of this entire study sounds a lot like a quote from *How the Grinch Stole Christmas*. The college or even professional school experience isn't about GPAs, hours of sleep, time until you graduate, or whether you have to work a part-time job while being a full-time student. The experience is dependent upon how many friends you make, the nature and number of organizations you become involved in, and a sense of belonging to the body of which you're a part.

Limitations

Potential limitations to this study include the nature of some of the questions, relying on students' self-reported levels of variables such as competitiveness that a student may or may not have either been aware of, known how to answer, or been willing to admit. The nature of several of the responses also could be a potential limitation to the study because the words used to indicate either strength of feelings, frequency, or even an amount of something may have been interpreted by students differently (e.g. one student may intrepret 'occasionally' the same as another student interprets 'frequently.') Requesting students' estimated "average" values of variables such as hours of sleep per night or days per week as exact numbers could also introduce significant error into the study, for those numbers were provided based on an individual students' perceptions rather than reality and exact, accurate counts.

The length of the survey could have been a limitation given that it was so long. Several students stopped me in the building and commented on the length, and twelve incomplete surveys were included in the data analysis. The two scales intended to measure satisfaction were placed at the very end, so students may have gotten tired of participating by that point and therefore may have given less thought to their responses. For the life satisfaction scale, 'Strongly Agree' was placed on the right side (5= "strongly agree" and 1= "strongly disagree"), but for the satisfaction with education scale, 'Strongly Agree' was on the far left (1= "strongly agree" etc.). While having the potential advantage of keeping the respondent engaged by requiring attention to the scale labels, this also could have served to create some confusion; it's possible that students may have

accidentally ‘disagreed’ with statements on the satisfaction with education scale as a result.

Also, for some of the analyses which grouped students by some of their more complicated responses, the sample sizes decreased, sometimes containing only four students in one of the groups. The third-year Early Entry students were not very well represented in the sample either, calling into question the accuracy of some of the between-class comparisons – this could be due to limited face-to-face promotion (in-person announcement to all of the members of their class.)

Recommendations for Future Research

Because membership in faith-based organizations was such a significant contributor to life satisfaction, satisfaction with education, and social involvement, it would be interesting to see if this was true for other populations, including other pharmacy schools, professional schools, or universities. It would also be interesting to compare professional classes of different sizes to investigate the relationship between class size and ease of developing close friendships with other students (do cohorts with smaller overall numbers have more internal friendships?). Because the Early Entry students were so poorly represented in the sample, it might be interesting to look at the effect of organizational involvement in pre-pharmacy students compared to professional students. It may be useful to differentiate between “professional organizations” and “non-professional organizations;” here at The University of Mississippi, pre-pharmacy students are encouraged to get involved in some of the national pharmacy organizations before

entering pharmacy school, but very few do. The differentiation was not made in this study's survey because it was assumed that by the time students enter pharmacy school, the majority of organizations they join are professional ones anyway.

In any future research, actions should be taken to maximize participation in each of the different classes being studied. Regarding motivation to participate, the fact that the PY1 class (my own cohort) had by far the highest response rate suggests that knowing me or having seen me may have influenced students' decisions to take the survey. Although there was surprisingly little variation between the three classes' responses, it may be valuable to include PY3 and PY4 students in future studies because they have had more time in the pharmacy "community" (professional organizations, etc.) and therefore might have significantly different levels of satisfaction and involvement. Regarding timing, for future administrations of surveys such as these, it would seem that any opportunity to administer the survey at the beginning of a class (or immediately prior) may increase the number of completed surveys, and students might be more inclined to take more time with their responses.

Future surveys should include more detailed questions regarding the nature of students' interactions with professors beyond differentiating between 'formal' and 'informal' interactions. Some questions could have been useful in explaining some of the unusual trends observed in this study. Why does a professor know a student's name (is it for positive or negative reasons?). Do students who take the time to meet their professors and make sure they know and remember them perhaps hold their professors to a higher standard, being more critical of their performance and provision of guidance? These and other aspects of the faculty-student relationship may be factors contributing to

satisfaction. While the faculty-student relationship may not be the most critical element of the satisfaction equation, it is apparent that relationships do matter.

Because relationships proved so significant in this study, it will be interesting to see how increasing use of video lectures and remote learning environments affects current and future students' satisfaction, involvement, and experiences. With improvements in technology happening almost exponentially, schools and faculty are exploring new methods of teaching that could ultimately result in a massive shift toward predominately online learning and pre-recorded lectures from teachers hundreds of miles from the students watching it. To return to the analogy concerning Maslow's Hierarchy of Needs, it's possible that this shift could make it increasingly difficult for students to achieve higher levels of the pyramid, with increases in online learning resulting in decreased peer interactions, making it harder for students to achieve that sense of belonging to a true body of students who may not even be required to be present in a classroom anymore. By moving classes away from a single room and toward laptops and virtual classrooms, many of the social aspects are taken away from the learning experience, and because of this, future students' satisfaction and involvement could be significantly impacted and should therefore continue to be studied in future research.

REFERENCES

American Association of Colleges of Pharmacy. *Academic pharmacy's vital statistics.* Retrieved from http://www.aacp.org/about/pages/vitalstats.aspx

Astin, A. W. (1999). Student involvement: a developmental theory for higher education. *Journal of College Student Development, 40*(5), 518-529.

Bachman, J.G., & Schulenberg, J. (1993). How part-time work intensity relates to drug use, problem behavior, time use, and satisfaction among high school seniors: are these consequences or merely correlates? *Developmental Psychology, 29*(2), 220-235.

Baird, L. L. (1969). A study of the role relations of graduate students. *Journal of Educational Psychology, 60*(1), 15-21.

Chisholm, M. A., Cobb III, H. H., Kotzan, J. A. (1995). Significant factors for predicting academic success of first-year pharmacy students. *American Journal of Pharmaceutical Education, 59*.

Chumney, E.C., & Ragucci, K. R. (2006). Student satisfaction and academic performance in a dual PharmD/MBA degree program. *Am J Pharm Educ, 70*(2).

Coffman, D. L., & Gilligan, T. D. (2002). Social support, stress, and self-efficacy: effects on students' satisfaction. *Journal of College Student Retention: Research, Theory, and Practice, 4*(1), 53-66.

Dinh Do, Q. (2005). Depression and stress among the first year medical students in university of medicine and pharmacy. Thesis presented at University of Medicine and Pharmacy in Ho Chi Minh City, South Vietnam.

Elinor, C. G., Chumney, & Ragucci, K. R. (2006). Student satisfaction and academic performance in a PharmD/MBA degree program. *Am J Pharm Educ, 70*(2), 29.

Endo, J. J., Harpel, R. L. (1982). The effect of student-faculty interaction on students' educational outcomes. *Research in Higher Education, 16*(2), 115-138.

Goplerna, E. N. Social support and stress during the first year of graduate school. *Professional Psychology, 11*(2), 283-290.

Gregg, W. E. (1972). Several factors affecting graduate student satisfaction. *The Journal of Higher Education, 43*(6), 483-98.

Kjeldstadli, K., Tyssen, R., Finset, A., Hem, E., Glide, T., Gronvoldo, N. T., Ekeberg, O., Vaglum, P. (2006). Life satisfaction and resilience in medical school – a six-year longitudinal, nationwide, and comparative study. *BMC Medical Education, 48*(6).

Madden, M. E., Linda, C. (1981). Students' satisfaction with graduate school and attributions of control and responsibility. New York: Paper presented at the Annual Meeting of the Eastern Psychological Association, 1981.

Marshall, L. L., Allison, A., Nykamp, D., & Lanke, S. (2008). Perceived stress and quality of life among doctor of pharmacy students. *Am J Pharm Educ, 72*(6), 137.

Mounsey, R., & Vandehay, M.A., & Diekhoff, G.M. (2013). Working and non-working university students: anxiety, depression, and grade point average. *College Student Journal, 47*(2), 379-389.

Samdal, O., Nutbeam, D., Wold, B., & Kannas, L. (1998). Achieving health and educational goals through schools – a study of the importance of the school climate and the students' satisfaction with school. *Health Education Research, 13*(3), 383-397.

Slack, M. K., & Murphy, J. E. (1995). Faculty influence and other factors associated with student membership in professional organizations. *American Journal of Pharmaceutical Education, 60,* 125-130.

Steinberg, L., & Dornbusch, S.M. (1991). Negative correlates of part-time employment during adolescence: replication and elaboration. *Developmental Psychology, 27*(2), 304-313.

Weber, M., Ruch, W., & Huebner, E. S. (2013). Adaptation and initial validation of the German version of the students' life satisfaction scale. *European Journal of Psychological Assessment, 29*(2), 105-112.

APPENDIX

Questionnaire

Participation in this study is completely voluntary and anonymous. There are no risks associated with taking this survey.

The purpose of this study is to identify contributing factors to student satisfaction and involvement within our School of Pharmacy, so please answer all questions as truthfully as possible.

By taking this survey, you are consenting to participate in this study. You can stop or withdraw at any time by simply exiting out of the browser, and your responses will be excluded from the study. You will not be asked to provide your name at any time during this survey, and the only demographic information collected will be your gender and classification in pharmacy school. At the end of the survey, you will have the option to input your GPA, but it is NOT required, and the rest of your responses will be included in the study regardless of whether you decide to answer that last question. Thank you for your participation!

This study has been reviewed by The University of Mississippi's Institutional Review Board (IRB). If you have any questions, concerns, or reports regarding your rights as a participant of research, please contact the IRB at (662) 915-7482 or irb@olemiss.edu.

Are you 18 years of age or older?

- ❍ Yes
- ❍ No

Select your gender.

- ❍ Male
- ❍ Female

Select your classification.

- ❍ EE3
- ❍ PY1
- ❍ PY2

Do you live with any other pharmacy students?

- ❍ Yes
- ❍ No

Please provide your opinions on each of the following statements, using the scale where 1= Strongly Disagree and 5 = Strongly Agree. Consider your current circle of friends.

	Strongly Disagree = 1	2	3	4	Strongly Agree = 5
I have a lot of good friends in college who are not in pharmacy school.	❍	❍	❍	❍	❍
Most of my good friends are in pharmacy school.	❍	❍	❍	❍	❍
None of my good friends are in pharmacy school.	❍	❍	❍	❍	❍
I don't spend any time with my classmates outside of class.	❍	❍	❍	❍	❍
My best friends are the ones I live with.	❍	❍	❍	❍	❍

In trying to do our personal best, we often try to improve over our last performance (e.g., on an exam, in a sport, on a video game, etc.) That is sometimes said to be called "being competitive with myself." In addition, many of us mark our own progress by watching the progress of others, by "competing" with them. In the area of school-related performance, on a scale of 1-5, how competitive are you with...

	Not Competitive = 1	2	3	4	Extremely Competitive = 5
The rest of your class?	❍	❍	❍	❍	❍
Your closest friends in your class?	❍	❍	❍	❍	❍

I spend _____ with my classmates outside of class.

- ❍ No time
- ❍ Some time
- ❍ A lot of time
- ❍ Most of my time
- ❍ All of my time

On average, how many hours a day of your time outside of class are spent with the following? (Do not count hours asleep or napping, but do include hours while eating, etc.)

_____ Classmates
_____ Friends who are not roommates
_____ Roommates

How many new friends have you made since starting pharmacy school with whom you spend a significant amount of time with outside of classes?

- ❍ None
- ❍ Exactly one
- ❍ Two or three
- ❍ More than three

Before starting pharmacy school, how many people in your class would you consider...

	None	A few	Some	A Lot	Most	All
An acquaintance?	❍	❍	❍	❍	❍	❍
A friend?	❍	❍	❍	❍	❍	❍
Neither acquaintance nor friend, but someone you "knew?"	❍	❍	❍	❍	❍	❍
Neither acquaintance nor friend and someone you did not know?	❍	❍	❍	❍	❍	❍

Since starting pharmacy school, how many people in your class would you consider...

	None	A few	Some	A lot	Most	All
An acquaintance?	❍	❍	❍	❍	❍	❍
A friend?	❍	❍	❍	❍	❍	❍
Neither acquaintance nor friend?	❍	❍	❍	❍	❍	❍

Since entering the School of Pharmacy, how often have you felt...

	1 = Frequently	2 = Occasionally	3 = Not at all
Isolated from things going on around you?	❍	❍	❍
Included in things going on around you?	❍	❍	❍

Since entering the School of Pharmacy, how easy has it been to develop close friendships with...

	1 = Very Difficult	2 = Somewhat Difficult	3 = Somewhat Easy	4 = Very Easy
Female students?	❍	❍	❍	❍
Male students?	❍	❍	❍	❍

Please rate your satisfaction with your School of Pharmacy experience thus far in terms of your...

	Very Dissatisfied	Dissatisfied	Neutral	Satisfied	Very Satisfied
...interactions with other students.	❍	❍	❍	❍	❍
...availability of social activities.	❍	❍	❍	❍	❍
...social life.	❍	❍	❍	❍	❍
...overall sense of community among students.	❍	❍	❍	❍	❍

You may have heard the term "Pharm Phamily" used by several to refer to the bonds between Pharmacy students, faculty, and staff. Indicate the extent to which you agree or disagree with the statement...

	Strongly Agree	Agree	Disagree	Strongly Disagree
I see myself as part of the "Pharm Phamily."	❍	❍	❍	❍

Complete the following statement (you can choose more than one answer): I am physically in the pharmacy building (including classrooms, study spaces, Science Library, student lounge)...(CHECK ALL THAT APPLY)

- ❑ For classes only
- ❑ For classes and often between classes
- ❑ When I'm studying
- ❑ Often on weekends
- ❑ For meetings (organizational, student body, or other)
- ❑ Other (please specify below) _____

Complete the following statement: I spend more time...

- ❍ Studying alone
- ❍ Studying with a couple of friends
- ❍ Studying in a larger group

On average, how many hours a day do you study?

_____ Drag the slider to your average study time in hours per day

Rank the following activities in order of which you spend the most time doing in an average week (1 = MOST TIME) to what you spend the least time doing (4 = LEAST TIME).

_____ Studying
_____ Sleeping
_____ Exercising
_____ Socializing with Friends (can include meals)

On average, how many days a week do you exercise?

_____ Drag the slider to your average number of days per week you exercise

In an average day, how many do you spend in each of the following activities? (Total must equal 24 hours.)

_____ Classes
_____ Work/employment
_____ Academics by myself (studying alone, reading the text, doing homework, etc.)
_____ Academics with others (study group, group projects, help sessions, etc.)
_____ Exercise or athletics by myself (running, biking, lifting, etc.)
_____ Organized exercise or athletics (intramurals, yoga, spin class, etc.)
_____ Sleep
_____ Preparing and/or eating meals
_____ Socializing with others
_____ Solo Entertainment (TV, reading, hobbies, etc.)
_____ Other

On average, how many nights do you "go out" during a month? (please use numeral and not written word for number) _____

Select from the choices below the one which best completes this statement. "_____ of my professors recognize my face."

- ❍ None
- ❍ One
- ❍ More than one
- ❍ All

"_____ of my professors know(s) my name."

- ❍ None
- ❍ One
- ❍ More than one
- ❍ All

Complete the following statement: (Check ALL that apply.) I have gone to see professors in their offices to...

- ❑ Introduce myself
- ❑ Ask a question about the lecture material
- ❑ Talk about a test
- ❑ Chat
- ❑ Other (Please specify) _____
- ❑ I do not go to see professors at all.

We may have formal meetings with a professor as an advisor (PDAT, academic advising, scheduled appointment to go over an exam, etc.). But you may also have had informal visits with professors as well, either in the hallway, in doorways, in the Student Center, in their offices, etc.

I would consider the majority of my meetings with my professors to be more...

- ❍ Formal
- ❍ Informal
- ❍ I do not meet with my professors.

Rank the following in order of what you are (1) MOST LIKELY to meet with a professor about to (6) what you are LEAST LIKELY to meet with a professor about.

_____ Academic or course information
_____ Discuss career concerns
_____ Resolve a personal problem
_____ Discuss intellectual matters
_____ Discuss campus issues
_____ Just to socialize

On a scale of 1-10 with 10 representing the greatest influence and 1 the least, what do you perceive the School of Pharmacy faculty's influence to be on your...

_____ Intellectual development?
_____ Personal development?

Please respond to each of the following questions below using "yes" or "no."

	Yes	No
Are you in a traditional fraternity/sorority on the Oxford campus?	❍	❍
Are you in a professional fraternity within the School of Pharmacy?	❍	❍
Are you a member of the Honors College?	❍	❍
Have you participated in any undergraduate research? (Note: taking online surveys for Psy 201 does NOT count.)	❍	❍
Do you have a part-time job during the school year?	❍	❍
Are you currently working in or have you previously worked in a pharmacy?	❍	❍
Are you active in a faith-based student group in Oxford (e.g. BSU, Campus Crusade, etc.)?	❍	❍
Are you an officer in any organization on campus?	❍	❍

If you answered yes to having a part-time job during the school year, approximately how many hours do you work in an average week? _____

How many organizations are you currently a member of? (Please use numeral and not written number. Include University-wide and School of Pharmacy groups in your total.)
_____

Please answer the following as truthfully as possible. (From the German version of the Students' Life Satisfaction Scale)

	Strongly disagree	Moderately disagree	Mildly Disagree	Mildly Agree	Moderately Agree	Strongly Agree
My life is going well	❍	❍	❍	❍	❍	❍
My life is just right.	❍	❍	❍	❍	❍	❍
I would like to change many things in my life.	❍	❍	❍	❍	❍	❍
I wish I had a different kind of life.	❍	❍	❍	❍	❍	❍
I have a good life.	❍	❍	❍	❍	❍	❍
I have what I want in life.	❍	❍	❍	❍	❍	❍
My life is better than most of my age.	❍	❍	❍	❍	❍	❍

The previous set of questions was about your overall satisfaction as a student, but the next few questions are referring to your feelings about the pharmacy program here at Ole Miss - please also answer these as truthfully as possible.

	1 = Strongly Agree	2 = Agree	3 = Undecided	4 = Disagree	5 = Strongly Disagree
I am satisfied that the program is meeting my needs/goals.	❍	❍	❍	❍	❍
The level of difficulty of the program is appropriate.	❍	❍	❍	❍	❍
The individual required courses at the school are appropriate and valuable.	❍	❍	❍	❍	❍
I have had the guidance necessary to complete the program successfully.	❍	❍	❍	❍	❍
I would recommend the program to an entering student.	❍	❍	❍	❍	❍

Remember: You do NOT have to answer this question. Please input your GPA below.

_____

If you have any questions about the survey or the study, please do not hesitate to contact me. Thank you again for your participation!

Invitation to Participate

Dear Pharmacy Students,

My name is Katie Bruchman, and I'm a PY1 this year. I'd like to invite you to participate in my study about student involvement and satisfaction with and through our School of Pharmacy. Your participation is completely voluntary, but if you choose to, you can follow the link at the bottom of this page to a survey that should take you about 10 minutes to complete. The survey is anonymous and voluntary, and you can discontinue it at any time if you change your mind about participating. For both my thesis and my pathway project, I'd like to gain some insight into how different pharmacy students spend their time here and how satisfied with and involved in this program they are.

If you have any questions about the survey or the study, feel free to contact me at kabruchm@go.olemiss.edu.

Thank you,

Katie Bruchman

Reminder to Participate

Hey everyone,

I know things have been busy, but I would like to remind those who haven't yet had a chance to respond to my survey about pharmacy student activities that the survey closes tonight at midnight. Please see the link below to complete the survey. Thank you to those who have already taken the time to do so.

Thanks again,

Katie Bruchman